

# ***Sportsman Pilot***™



***Winter***



***1984***





# Sportsman Pilot



VOLUME 3

WINTER 1984

NUMBER 4

ALL ARTICLES AND PICTURES BY JACK COX UNLESS OTHERWISE CREDITED.

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Luscombe 8E  
owned by Gregg McElreath of Denton, NC.



Beech G17S Staggerwing  
owned by Bob Allen of Fayetteville, NC.

EDITOR/PUBLISHER J. B. "JACK" COX ☉ ADVERTISING MANAGER GOLDA COX

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## MAG CHECK

It's the silly season down in Washington.

Congress and the Executive Branch are beginning to square off for their annual Battle of the Budget and, as always, no stone is being left unturned in the search for new tax dollars. Every year about this time we see a bevy of trial balloons released - new, often outrageous taxation proposals being launched to test the public's reaction to them. Fortunately, most fall by the wayside as those who would suffer most scream bloody murder, but the process does serve the useful purpose of letting us know what government is thinking . . . and lets government know just how far it can reach into our hip pockets. It's a silly game but it's one of the ways a democratic society muddles through.

This season's Most Outrageous award will undoubtedly go to the Congressional Budget Office, which recommends increasing the general aviation fuel tax to one dollar per gallon! This, mind you, at precisely the same time several senators are introducing bills to reduce or cease altogether our **existing** fuel tax levies because of the huge surplus piling up in the aviation trust fund.

The Budget Office has trotted out it's usual lame excuse for such a tax increase: "general aviation doesn't pay it's way." There's a new twist this time, however. For the first time, it is acknowledged that business aircraft are the ones running up the big bills, by virtue of their heavy use of the ATC system. And also for the first time, the Budget Committee acknowledges the existence of "recreational flying" . . . and the fact that it makes little or no use of ATC. The recognition doesn't buy as much, however. There are casualties in every war, the Committee says in so many words, **and they are us**. It would be just too burdensome on the tax collectors to have a tax in which pilots pay in proportion to the use they make of government services . . . so Quicksilver owners would have to pay at the same rate as General Motors would for one of its corporate jets.

Well, troops, you know how the game is played . . . and you know who would suffer most. Call or write your Congressman and Senators **and scream bloody murder**.

They're expecting to hear from you, you know.





# KALEIDOSCOPE

Doug Rounds' Curtiss Wright Travel Air 6B Sedan.  
(Doug Rounds Photo)



## DOUG ROUNDS' BIG 6B

Well known antiquer, Doug Rounds of Zebulon, GA, plans to be out on the air show circuit in full force this year with his magnificent Curtiss Wright Travel Air 6B Sedan. It was initially flown late last summer just in time for Blakesburg but still needed those inevitable finishing touches to be 100%. Doug is taking care of those items this winter. The 6B took one day less than 8 years to restore and was fitted out as the 1930 Ford Air Tour entrant flown by Truman Wadlow - with wheel pants and Townend ring.

It's rare these days to see a "big" antique restored - the 6B is a 6-placer - so we commend Doug for biting the bullet, financially and otherwise, to get the airplane flying for the rest of us to admire. It's quite an accomplishment.

## SEZ MR. PIPER

Elsewhere in this issue you will read a little philosophizing about the middle age spread of personal flying (in "G. L. Smith's Moni", page 14). Subsequently, we have come across a quote by William T. Piper, Sr. who obviously held similar views. Addressing a press conference in Detroit shortly after World War II, Mr. Piper commented, "We are not in the market to sell planes to people who can't use them. Private flying should be left to persons aged 45 to 50 who have established themselves and found that they have the money, time and ability to fly a lightplane."

## NEW LONG-EZ RUDDERS

Long-EZ builders now have the option of larger rudders for coping with strong crosswinds on narrow runways. A taller, narrower chord rudder has been developed by Rutan Aircraft Factory that has over twice the area of the old ones - and with more than twice

the effectiveness, according to RAF's Mike Melvill. Called High Performance Rudders, they are retrofitable to existing Long-EZs and, of course, can be built into new ones. Plans are available for \$18.50 from Rutan Aircraft Factory, Building 13, Airport, Mojave, CA 93501.

## CULVER CADET PROTOTYPE

Don Taylor of Hampshire, IL who is best known for his association with aerobatic competition and as the creator and director of the unique Hilton Masters also has an interest in antique airplanes. He recently bought the Serial Number 1 Culver Cadet from his neighbor, Dick Perry. Dick had partially restored the little bird, so Don should be able to get it flying again soon.

## DOWN MEMORY LANE

Before World War II, Piper Aircraft Corporation published a company newspaper called **The Cub Flier**. Unfortunately, they were undated, but the Volume III, Number 4 edition, which must have been issued in late 1939, contained some historic news. The headline read, "One Thousand Cubs January To August Inspire Celebrations" - with the subheading, "Eight Months Record Equals Half Production of Past Eight Years." The first paragraph tells it all: "Until August 19, 1939 no airplane company ever turned out 1000 airplanes in a single year, and when on that day the 1000th 1939 Cub rolled off the assembly line, Cub distributors, dealers and operators celebrated enthusiastically. Phil Meinke, Willoughby, Ohio took delivery of that epochal ship, a Franklin 50 hp seaplane Cub Trainer, and opened the day at Willoughby with demonstrations and an Airodeo that continued as an Ohio State airtour that carried the 'Wings For Tomorrow' celebration throughout the weekend." The article went on to describe other celebrations

across the U.S. - and to present the statistic that Cub sales accounted for 55.2% of ALL lightplanes sold in the U.S. that year.

A thousand Cubs in the first 8 months of 1939 will mean more to you when juxtaposed with Piper Aircraft's 1983 production figures. Through the first 11 months of '83, the company sold a total of 596 aircraft - out of 30 models Piper currently markets!

Ah, progress!

Another interesting item in that same **Cub Flier** was picture coverage of a Cub Coupe outfitted as an instrument trainer . . . owned and operated by Tony LeVier "at his school at East Side Airport, Los Angeles, California."

## MERCED DATES

The 27th Annual Merced West Coast Antique Fly-In will be held June 1-3 at the Merced Municipal Airport, Merced, CA. For further information contact Dee Humann, Registration Chairman at 209/358-3487.

## EIPPER MX SUPER

Eipper Aircraft has come full circle with its product line. The company has developed a version of its Quicksilver to be sold as a homebuilt kit. Called the MX Super, it exceeds the FAA Part 103 weight requirements for ultralights, so must be licensed and be flown by a Student pilot or better. The airplane features a symmetrical airfoil, a Rotax 503 engine that cranks out 75 horsepower, an inverted fuel system, an 11 gallon fuel capacity (for a 200 mile range), a pilot fairing, wheel pants and a 4-point aerobatic harness. Placarded for limited aerobatics, the MX Super will cruise at 62 mph and has a 750 fpm rate of climb - 500 fpm inverted. For further info, send \$5.00 for the info pack to Eipper Aircraft, 26531 Ynez Rd., Temecula, CA 92390.

## DAGO RED GOING FOR THE RECORD

Frank Taylor, owner of the Unlimited racer Dago Red, a highly modified Mustang, will try for the world's speed record currently held by the late lamented Red Baron. The attempt will be made in late July in the Denver area.

## DUAL ENGINE

Molt Taylor has more irons in the fire than a village blacksmith. Among his many projects, he and his associates are running a couple of 2-cycle ultralight engines lashed up in a "dual engine" configuration. Shown last summer at Oshkosh in a preliminary state, the engines mount side-by-side and drive a single prop shaft through belt drives and, of course, a Flexidyne drive. The idea is to lift 2-cycle operation to a level of reliability near that of 4-cycle aircraft engines by having two of them driving the same propeller. If one fails, the other one can get the aircraft down to a safe landing. Economy of operation is another goal. After take-off, one engine can be shut down so the plane can cruise on the other.



If all this sounds familiar, you will need little prompting to recall that the Learfan has a similar power package, utilizing dual turboprop engines . . . as well it should. The Learfan was conceived by Bill Lear and Molt Taylor on the back of a menu at Butch's Anchor Inn at Oshkosh during a lunch break from the 1977 EAA Fly-In. That evening back at the Stoney Beach Motel, they continued their sketching on the back of a calendar they snatched off the wall - the largest piece of paper they could find.

Molt and friends are also installing a variable and reversible pitch, Kevlar bladed propeller on a friend's Long-EZ. The prop is Molt's design, of course, and has a Flexidyne drive built into the hub. It promises to open the Long-EZ's performance envelope considerably. Any airplane with the EZ's speed range profits by the installation of a variable pitch prop.

## THE VERSATILE MONI

John Monnett is flexible. If you want a mono-legged Moni, he'll sell you one; if you want a tri-geared version, he'll sell you one of those, too. Responding to customer demand once again, he has announced the availability of an optional wing construction method. The standard kit has a bonded wing - but for those of you who would rather rivet than glue your wing together, John offers ribs with wider flanges and a handful of rivets. Customers will simply specify which method they prefer when ordering a Moni kit.

## AEROMOTION TWIN

Aeromotion, Inc. of Oshkosh is about to ship the first production versions of their 4-cycle twin aircraft engine. Most will go to homebuilt designers to try out in their new existing designs. Ken Brock and John Monnett are among the first scheduled for an engine.

## NEW GYRO MOTOR

Ken Brock has a 65 hp water cooled Rotax engine in one of his KB-2 gyroplanes. In test flights to date, the engine is performing very well, indeed - "as well as or maybe even a little better than a McCulloch," he says. Ken has been searching for years for an acceptable substitute for the slowly vanishing Mac. He'll also be flying one of the first Aeromotion twins soon.

## BLACK JACK TO MUSEUM

Roscoe Morton, the Voice of EAA at Oshkosh, Sun 'N Fun and elsewhere, has donated his Pitts "Black Jack" to the Virginia Aviation Historical Society Museum. It was delivered to Morton Lester, who accepted it for the Society, by Roscoe's 19 year old son, Jay. The Pitts was completed on 1-10-65, the day after Jay was born.

## CUB CRUISER . . . CONTINUED

Our coverage of Joey Sahakian's Cub Cruiser in the Fall '83 issue struck a responsive chord for a number of you - Joe Norris



Joe Norris' Piper J5A.  
(Joe Norris Photo)

of Wisconsin Rapids, WI in particular. He writes:

"I, too, am the proud owner of a 1940 Piper J5A, and as I read the article on Mr. Sahakian's Cruiser I found that much of this airplane's story parallels the history of my bird.

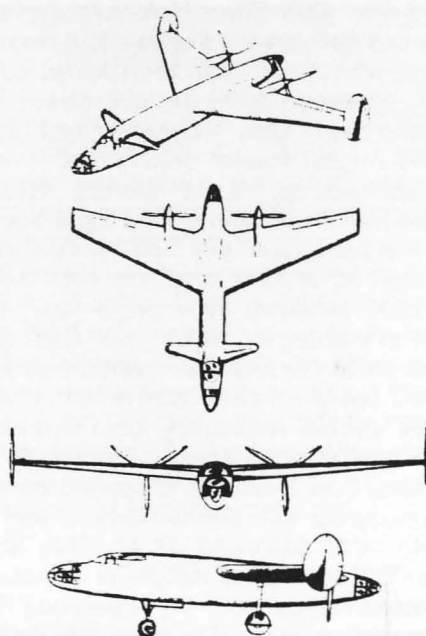
"Evidently, Californians aren't the only ones that hold on to their Cruisers. My Cruiser has only had four owners, including me, in its 43 years, and I, like Mr. Sahakian, will NEVER sell it! My plane has also had an engine transplant, as has Joey's. My Cruiser's 75 horse Continental was lifted in favor of a C-90 in 1949, and that engine is still in it today. Boy, does it climb!

"Fortunately, all my bird's previous owners were satisfied with things as they were. My Cruiser still has the original panel and instruments, as well as all other controls and fixtures. I hope to someday have my bird looking as good as Joey's."

Joe's airplane is NC 32892, Serial No. 5-399. Isn't it marvelous to see these fine old airplanes in appreciative hands.

## WHAT'S NEW DEPT.

While flipping through an old issue of **Aero Digest** recently, I chanced upon drawings of an airplane design for which a patent had just been issued. The caption read: "Design for an airplane. Clarence I. Johnson and Ward W. Beman, Burbank, Calif., assignors



to Lockheed Aircraft Corp. (119,334)." Clarence I. Johnson is, of course, the legendary "Kelly" Johnson of Lockheed "Skunk Works" fame.

Note the similarity in configuration with the new Beech Starship 1 and Gates/Piaggio GP-180. The patent was issued in the early 1940s.

## CHINA SOJOURNE

Joe Horvath of Revmaster and Gene Sheehan of Quickie Aircraft returned to the U. S. recently after several weeks in China. Details of their trip are, of course, largely confidential, however, forged crankshafts, complete Q2 and Q200 airframes are among the items known to have been discussed. Could have far reaching implications for sport aviation.

## POLLIWAGEN CERTIFIED

Many nations do not have homebuilt regulations as we do in the U.S. To build and fly a homebuilt in such places, one must accomplish what amounts to a one time certification of the airframe and engine, including the paperwork, load testing, etc., that a factory would have to do. It's quite a task, but a builder in Switzerland has just recently completed certification of his Polliwagen. Joe Alvarez tells us one of the things absolutely required was strict adherence to the plans. No deviations and/or additions allowed.

## CYGNET POPULAR

Rex Taylor says he has been stunned at the response he has been getting on the Cygnet since he purchased the prototype and rights from Bert Sisler. Seems there are a lot of people out there interested in a short field, go-anywhere **homebuilt**.

## DITTO KOALA

- And although it is an ultralight, Mike Fisher's Cub-like Koala is enough of a "real" airplane to be getting the same sort of response. An added plus for the Koala and its predecessor, the FP-101, is the fact that they are built much like a very large model airplane. A lot of people out there in society can identify with that kind of airplane.

. . . continued on page 25





# Camden '83

Everybody has heard of Oshkosh, Sun 'N Fun, Blakesburg, Watsonville and Merced — they are the biggies of the fly-in world. They are, however, just the highly visible tip of the iceberg. On almost every weekend of the spring-to-fall sport flying season in the U.S., a smaller event is taking place somewhere in the land. These local and regional events are very important elements in the fabric of the sport aviation movement. Not everyone can go to Oshkosh or Blakesburg every year . . . and some never go . . . so the local events fill the gap by providing the opportunity for one to participate and to enjoy the comradeship of like-minded enthusiasts — pleasures essential to the continuing existence and growth of the sport.

One such event is the Fall Fly-In of EAA Antique/Classic Chapter 3, held each October at Woodward Field in Camden, South

Carolina. It is a mature event, dating back to the early 60s . . . and until the spectacular success of Sun 'N Fun in the 70s, was the largest fly-in of any sort on the East Coast. Held in the early years at Gastonia, NC, the site was switched to Camden's big and not very busy airport in the early 70s.

Although sponsored by an antique/classic group, the meet is typical of most EAA fly-ins in that all types of sport aircraft are welcome and are eligible for awards. The event is hosted by Bill and Ann Hawkins of Hawk Aviation, the FBO at Woodward Field.

EAA Antique/Classic Chapter 3 is unique in that it is a 3 state organization, encompassing Virginia, North and South Carolina. It sponsors two fly-ins a year, one in spring at a rotating site and the fall meet at Camden. The area has always had a strong antique airplane tradition, including what is con-

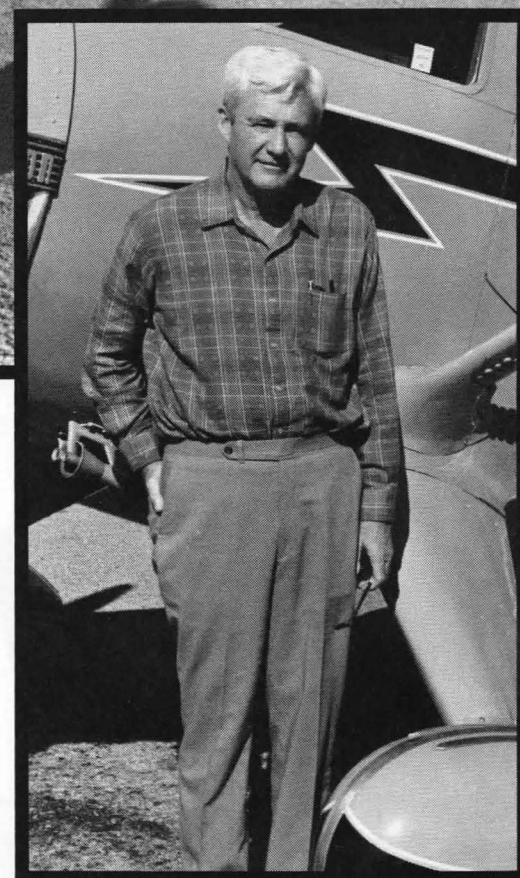
sidered by many to be the first of the modern day super restorations, Ernie Webb's OXX-6 powered Travel Air 2000. Appearing on the fly-in circuit in the early 60s, this magnificent machine was Grand Champion Antique at every fly-in it ever attended, including Oshkosh . . . until, finally, in near embarrassment of riches, Ernie began asking that it not be judged. Although not shown for a number of years, Ernie still owns the airplane and there is good reason to believe it may begin appearing at fly-ins again. Hopefully it will.

The group was also the home chapter for Dolph Overton's fabulous collection of antique aircraft that was the nucleus of the ill-fated Wings and Wheels transportation museum. Dolph was a past president of the Chapter and Wings and Wheels' original location in Santee, SC was the site of several very successful Chapter 3 fly-ins.





Contemporary Age winner at Camden was a 1939 Stinson SR-10C owned by Dolph Overton of Smithfield, NC. NC23790 is the only SR-10C of 117 built in the late 30s to still be listed by FAA as licensed and flying. Powered by a Lycoming R-680-D5 of 260 hp, it is painted orange and trimmed out much like the Gulf Oil company planes of the 30s. Note the chromed grill work on the cowl. This and much of the interior decor were intended to be auto-like to appeal to wealthy owners. The SR-10 series was the last of the civilian Stinson gullwings.



Dolph Overton



I must also admit to those of you from other parts of the U.S. and the world, that this Chapter is where your editor got his start in the wonderful world of sport aviation. My first opportunity to write about our kind of flying came as the newsletter editor for the group. Thus it was that Camden '83 was a homecoming of sorts for Golda and I. It had been a number of years . . . too many . . . since we had been back home for a fly-in. What amazed us was how stable the group is. Most of the faces we saw were new, but so many were those of old friends from well back into the 60s. Even a few of the old airplanes from the 60s were there, including the Bellanca 14-13 I sold just before we

moved away in January of 1970.

To be truthful, we found virtually nothing had changed over the past decade except for some graying heads (mine included) and, sadly, some missing faces we'll not see again. The homefolks were the same friendly airplane addicts they've always been and the fly-in was the sort of low keyed, stand-under-a-wing-and-visit event it has always been. The South has a great tradition of family reunions . . . and that's what this fly-in is like. It's great!

Activity begins on Friday with nothing planned other than arrivals of aircraft and greeting of pilots and passengers. Late in the day an old fashioned barbeque is held

in one of the hangars, after which everyone departs for the Holiday Inn, Chapter headquarters for the weekend. At 9:00 p.m. the faithful settle down to watch old aviation movies from Morton Lester's fabulous private collection . . . lasting until the wee hours of morning.

Saturday is the actual fly-in. By mid-morning everyone who is coming is there and the day settles down to an endless stream of fly-bys, of non-stop airplane ogling and conversations with owners, picture taking and maybe a little horse trading here and there. A lot of parts and pieces and, occasionally, airplanes change hands at the fly-in. Only the judges are working — scurrying to and

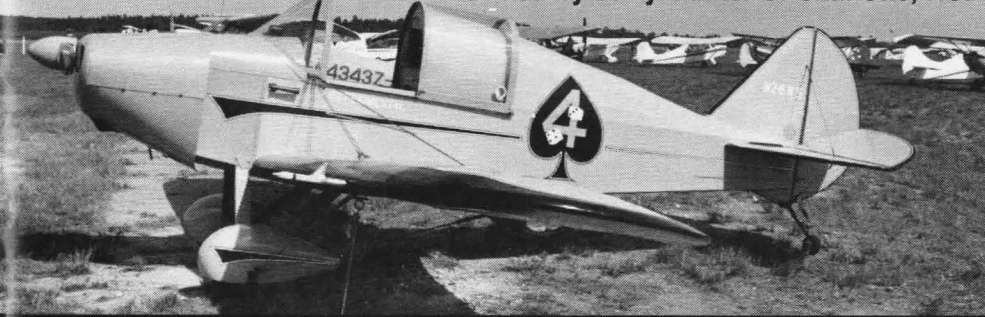




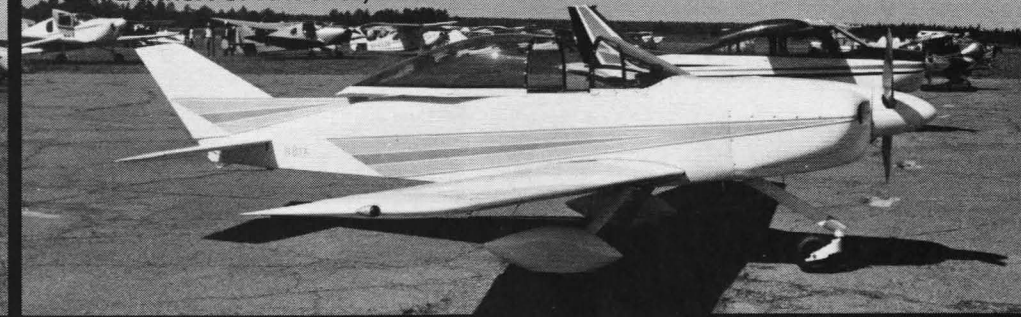
Swanson Poer's 1938 Beech F17D, powered by a 330 hp Jacobs L-6. It was impressed into Army service during World War II (as a UC-43C), and upon its discharge to civilian life, was flown for many years on fire watch by Johnson Flying Service of Missoula, Montana. Damaged in a forced landing in 1960, NC2595 was hauled all over the U.S. as a near basket case until purchased in 1969 by Swanson Poer of Greensboro, NC. Swanson did a complete restoration and has maintained the Staggerwing as a sportplane since the early 70s.

Swanson Poer

A highly modified Bowers Fly Baby owned by Jerry Gunter of Charlotte, NC.



A sleek little Sidewinder owned by Malcolm Bennett of Andover, MA.



fro with clipboards at the ready as they strive to evaluate all the show planes. They had 135 to critique during this weekend . . . out of a total of 226 aircraft that flew in for the show.

One of the highlights of the day for me was a ride with Swanson Poer of Greensboro, NC in his Jacobs powered Staggerwing. The memories came flooding back as we thundered off into a beautifully clear Carolina sky — to the days when the airplane was a dust covered hulk in a hangar at Lumberton, NC, to the day Golda spotted it being trailered north to Greensboro, to its days collecting dust again at Air Harbor airport near Greensboro (where I learned to fly,

incidentally, in 1956), the call from a very excited Swanson after he purchased the "remains" . . . "Finally got me a Staggerwing!" . . . and then visits with Swanson and Jackie, watching the garage and bedrooms full of parts slowly empty out, the contents evolving into something that actually resembled an airplane . . . getting the word the Stag had flown . . . and my first ride in it off Wings and Wheels sandy 2900 ft. strip.

Somehow, the 15 years or so seemed strangely compressed, with the isolated happenings and visits lined up one after the other without the intervals between as they actually had been . . . as if all those days had come just last month. Funny how the

pleasant memories seem so fresh.

When I first met him back in the mid-60s, Swanson's goal was to someday own a Staggerwing. He achieved it — the hard way, by means of a laborious total restoration — and I'm proud and more than a little pleased that he's still enjoying the airplane today . . . and that I could share his feelings for it for a brief moment.

That evening everyone gathered at the local Shrine Club for the awards banquet. I attend fly-ins all over the U.S. each year and although all of them follow a similar format, each has its own distinctive character. Camden, for instance, differs from all the rest in that its banquet is a coat and tie affair, and





Gene and Pat Padgett of Marion, NC with their Cessna 140. We hardly have enough pages to list the airplanes Gene and Pat have owned and restored over the past 20 years or so. Gene is one of the world's foremost authorities on Luscombes, but has restored scores of other types as well. He's also into antique cars these days.

Oldest pilot to fly an airplane to Camden was 75 year young Doug Creech of Pineville, NC — in his exceptional T-34. Doug was a champion motorcycle racer in the 30s, a national champion boat racer in the 40s and 50s and enjoys retirement today flying his airplanes.

Photo by Golda Cox



always has been. It's not a stuffy, formal evening — everyone has fun — it's just a reflection of the customs of the area. Some vestiges of the Old South . . . the good things . . . live on in the Carolinas.

After a feast of good Southern cookin', the honored guest, Colonel Bob Johnson, USAF Retired, was introduced. Author of the book **Thunderbolt!**, Johnson was the first American to exceed Rickenbacker's World War I score, downing 28 German aircraft in 11 months. Before being pulled out of combat, he had risen to command of the 61st Fighter Squadron of the famous 56th Fighter Group led by "Hub" Zemke.

For the next hour we enjoyed a totally ab-

sorbing first person account of what it was like to battle Messerschmitts and Focke Wulfs in a P-47 Thunderbolt. It was interesting to watch Johnson as he spoke. His bearing, voice inflections and total control of the situation still show the unmistakable hint of cockiness possessed by all the great fighter pilots. It was easy to sense that here was a guy you wouldn't have cared to tangle with — on the wrong side of eight .50 caliber machine guns!

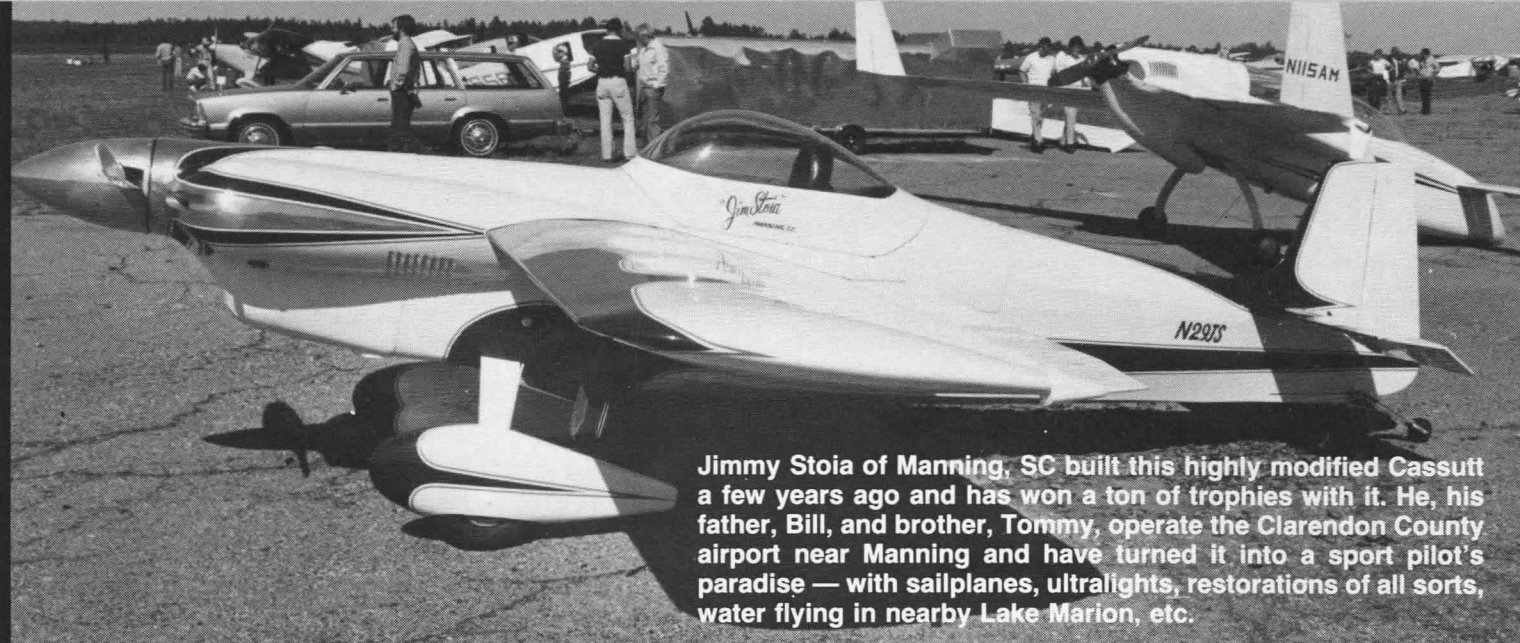
After Bob Johnson came the fly-in awards. A full slate of deserving type and class winners among homebuilts, vintage and warbird aircraft was honored before the Classic and Antique Grand Champions were announced.

The Classic winner was Harold and Bob Armstrong's Aeronca Champion, fresh from being named Grand Champion at Oshkosh in August. With credentials of this sort, it goes without saying that the airplane is as perfect as two extremely talented restorers could possibly make it. Harold and his son, Bob, also have a magnificent Waco 10 to their credit . . . and an early Pitcairn on the way!

The Antique Grand Champion was Vernon Ford's stunning Howard DGA-15P . . . which you can read about elsewhere in this issue.

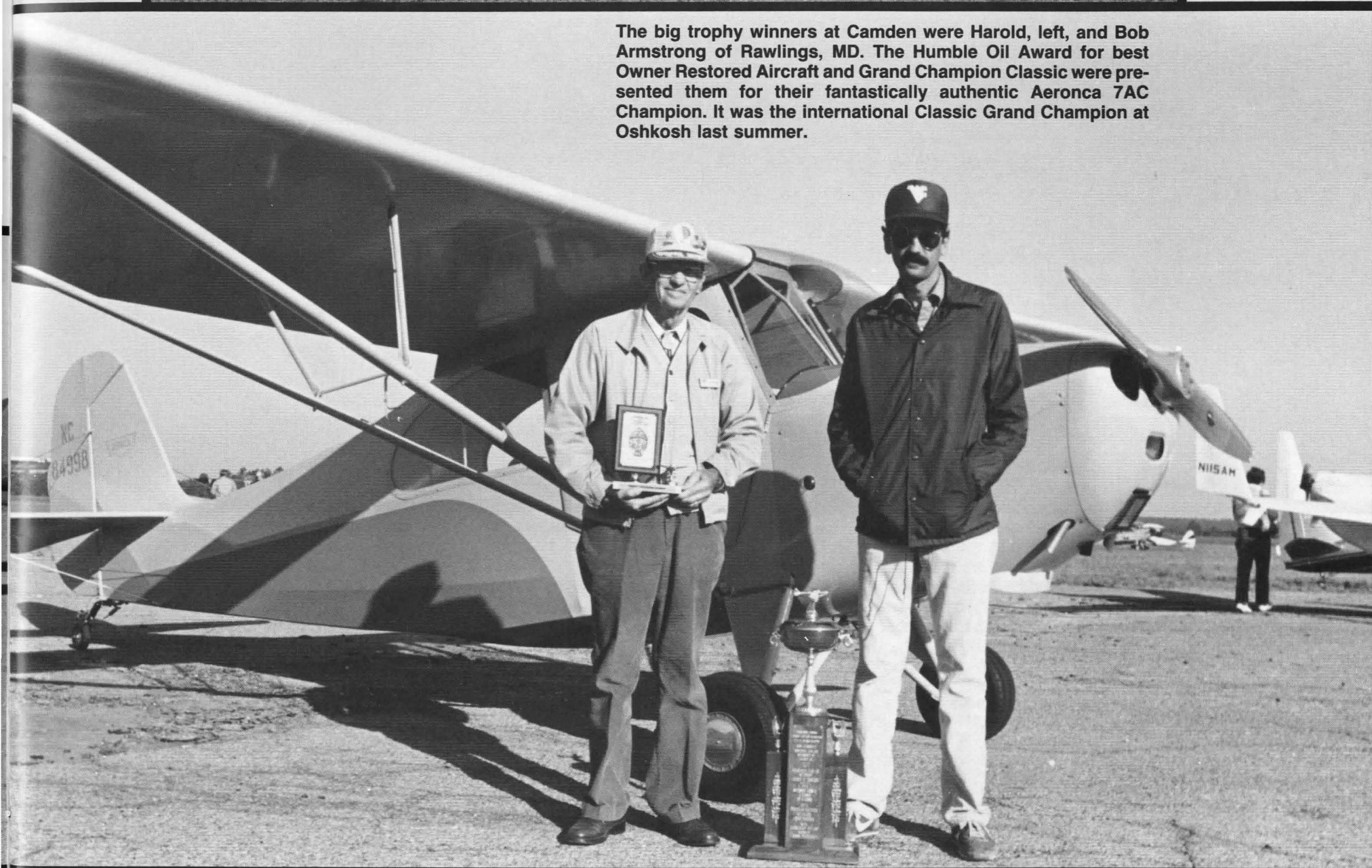
The next morning I drooled one time too many over the Armstrong's Champ and got my hand called. Bob told me to "go fly it and





Jimmy Stoa of Manning, SC built this highly modified Cassutt a few years ago and has won a ton of trophies with it. He, his father, Bill, and brother, Tommy, operate the Clarendon County airport near Manning and have turned it into a sport pilot's paradise — with sailplanes, ultralights, restorations of all sorts, water flying in nearby Lake Marion, etc.

The big trophy winners at Camden were Harold, left, and Bob Armstrong of Rawlings, MD. The Humble Oil Award for best Owner Restored Aircraft and Grand Champion Classic were presented them for their fantastically authentic Aeronca 7AC Champion. It was the international Classic Grand Champion at Oshkosh last summer.



find out if it flies as good as it looks". Now, no one has more respect for the awesome amount of work that goes into the restoration of a prize winning airplane or for what these machines mean to their owners, so I normally refuse such invitations. This time, however, I allowed my arm to be twisted. I **really** wanted to fly that airplane. I once owned a Champ, myself, and although it was nicer than most, it was nothing like this one. I've known the Armstrongs for a long time and I knew this would be a once in a lifetime opportunity to fly a perfectly rigged airplane. I just wanted to see what that would be like.

I flew the Champ for 20 minutes, long enough to feel it out pretty thoroughly. I was


right on in my expectations: it is the nicest handling Aeronca I've ever flown . . . to a degree, in fact, that, afterwards, I had to tell the Armstrongs I really couldn't compare it to any of the others. It is that far removed from the garden variety Champ. I don't know what they did with the ailerons, but they are so light and responsive it was hard to believe they were on a 7AC. Proper cable tension and new and well lubricated pulleys and bearings are likely the reason. I'm grateful to Bob for trusting his Grand Champion to me . . . and I can say to you judges who lavished all the honors on the airplane last summer, "You were absolutely right in your decisions . . . and, yes, it **does** fly as good as it looks."

By the time I taxied the Champ back to its parking spot, the ramp was beginning to look rather bare. The weekend and the fly-in were quickly drawing to a close. It had been a tremendously enjoyable three days. The weather had been beautiful and the flying had been accident free. All the rest, the beautiful airplanes, the camaraderie, were what we've come to expect at fly-ins everywhere.

Camden, though, was special for Golda and me. I realize this report has been far too personal and I apologize for that, but all of us who love flying and airplanes are enough alike that I know you understand.

For once, we found, you **can** go home.





# VERNON FORD'S GRAND CHAMPION HOWARD

Woodward Field, nestled in the outskirts of Camden, South Carolina, was a busy training base during World War II, and after VJ Day it became a site for selling off surplus military aircraft. Old timers recall row on row of Stearmans, BT-13s and a variety of other types there going for just a few hundred bucks apiece. Many were new airplanes with little more than ferry time from the factory, a situation that often led civilian buyers to make their choices on the basis of how much fuel remained in the tanks!

One of the aircraft cashiered out of the service at Camden was a Howard with less than 200 hours on its tach. Bevo Howard's Hawthorne Aviation got the job of relicensing it as a civilian DGA-15P with the number NC66294 . . . and soon the new owner was winging his way home to California. He later sold it to a pilot in Texas who, in turn, eventually sold it to a fellow in Georgia. Later still, a second Georgian bought the Howard and in 1959, dismantled and stored it in a Savannah warehouse . . . where it collected dust for the next 12 years. There were 497 hours in the logs when the airplane was put in hibernation.

In 1971, 66294 was purchased by Vernon Ford, the FBO at Ft. Pierce, Florida . . . who put it right back into storage for another 9 years. In 1980, he began a complete restoration . . . and flew the airplane in the Spring of 1983.

And then, ironies of sweet ironies, in October of last year Vernon flew the airplane

back to Woodward Field . . . and on the very ramp outside the same big ol' hangars where Uncle Sam had kissed it off for a song some 37 years before, the Howard was named Grand Champion Antique of EAA Antique/Classic Chapter 3's annual Fall Fly-In.

Aviation is **such** a small world!

My first glimpse of 66294 was from half-way across Camden's vast ramp — yet, I knew instantly who had restored it. So dead a giveaway was the airplane's paint job that it might as well have had the restorer's name written down the side of the fuselage in letters 3 feet tall! Vernon Ford has restored a number of antiques over the years, most notably a gull wing Stinson and a Staggerwing, and each has been finished in a singularly bright and beautiful shade of yellow — with white trim. It's Vernon's yellow — he has the pigment formula and has the paint specially mixed by Stits. It's his "trademark" today, much like an artist affixing his signature to a painting.

He's an artist, all right — but don't expect an artist's temperament. Vernon is a business man . . . and he's all business. Ask him a question and you get a straight answer — things like:

"I started restoration on October 1, 1980 . . .

"It took me 2 years and 8 months to restore it — and 3,340 manhours."

Not "a little over 3 thousand hours", mind you, but **precisely** 3,340 hours!

And the Howard was special, too. The

Stinson and Staggerwing, nice as they were, were actually done on speculation to sell. But the Howard — well, this is what Vernon told me:

"This was the ultimate airplane, the one I wanted for myself to keep forever and ever. The other airplanes I had done were just a means to an end. I had it in storage all that time, since '71, until I could get my new business started and get my act together to where I could go through with it.

"I stripped it down to bare bones — to square one. I sandblasted the tubing and re-oiled it. Every piece on that airplane is either new, overhauled, certified, lubed, greased, painted, plated or something. Whatever it needed, it got. I didn't waste any money, but I didn't spare it. There's **nothing**, down to the smallest door latch, that hasn't been taken care of."

One conscious effort that began the first day Vernon laid hands on the airplane was weight reduction. He stripped out "all the old GI stuff" — wiring, old style (heavy) gyros and much more. 20 pounds were saved by replacing the old generator with a modern alternator, for instance, and his entire package of solid state King radios, ADF and transponder, including antennas, weighed less than just one of the 50s style, tube-type radio power supplies. As you will see, it paid off handsomely.

Vernon did all his own work, except for the engine. He farmed the Pratt and Whitney R-985 out to the Sebring Air Depot, an outfit



that specializes in round engines for the very large ag plane market in Florida. They did the basic overhaul but left the cosmetic work to Vernon. After determining the nose, main and accessory cases were airworthy, they cleaned and etched them — then turned 'em back over to Vernon for painting. He had a lot of fun zipping to and from Sebring in his Super Cub — his parts chaser. All the polishing and chrome plating was done or contracted for by Vernon, also, and when all was in readiness, Sebring Air Depot assembled the engine and signed it off for return to service.

A lot of time was spent on sheet metal work. The Howard's fuselage is covered with removable cowls and panels essentially back to the rear of the cabin and a lot of it, mainly the flat wrap sections, had to be replaced. They were airworthy, but had simply sustained too many dings and dents over the years to go back on a top drawer antique restoration. Fortunately, the cowl was in good shape, requiring relatively little work to look like new. The big wheel pants were another story, however. In the first place, there weren't any. The Howards built for the Navy did not include pants and, apparently, the subsequent civilian owners had never installed any. Vernon managed to locate a pair from a civilian Howard in New York state and although they were in pretty sad shape, he was able to beat them out and finish them to such a state of exterior perfection that only his aching joints know the truth today.

What could have been the biggest job of all turned out to be a proverbial piece of cake. The all-wood wing, with its beautifully tapered tips, can be a real bear if it has to be extensively rebuilt. The Howard factory personnel assigned to building wings were

woodworkers of the first order and duplicating their level of workmanship today is no simple task. Fortunately . . . no, **miraculously**, considering the fact that they had been stored for 21 years in the most humid part of the U.S. — within miles of the Atlantic at both Savannah and Ft. Pierce . . . the wings were in excellent shape.

Finally, after all the major airframe work and the "little" things like steam cleaning and pressure testing all the fuel tanks, it was time to recover the new/old bird. There was no question here. Vernon thinks the Stits process is "the best there is" — so, naturally, that's the only thing he would put on his "forever and ever" airplane. He also did his own upholstery work, making and installing plush seat and side panel covers, with carpets to match. The front seats are built up with a very firm grade of foam so both occupants sit right up in the cabin roof where the view is superb for a radial engine tail-dragger and the firmness of the foam ensures that one will still have that view when it's time to land after a long flight. It doesn't compress and leave the pilot craning his neck to see over the panel.

The final act of the restoration was the moment of truth — weighing the beast to see what price had been paid for all the bright work, custom touches, shining finishes, etc. Vernon had worked very hard to keep the Howard light — and he succeeded. The scales read 2840 pounds empty . . . certified scales being operated by an A.I. This is quite a bit lighter than most Howard restorations that have been done in recent years, so much lighter, in fact, that Vernon feared that no one would believe the number. Consequently, he had the A.I. write up the weight and balance info on his letterhead and then had it notarized to include in the airplane's

records.

Performance . . . real world performance numbers?

"At 9,500 feet I'm truing out at 174 mph and it costs me 22 gallons per hour to do it. It takes 11 minutes from the time you open the throttle on the runway — at sea level — to get to 9,500 feet. You can average 1,000 fpm to about 5,000 feet, but it starts to drop off after that. It's about 10 mph slower than a 450 Staggerwing."

So, what did Vernon think of the Howard after having flown it for 34 hours?

"I'm just totally pleased with it. It's the best airplane I've ever had (he's had a bunch). I'm not talking about what I did to it, I'm talking about the Howard as an airplane. It's absolutely the best I've ever owned and flown. It's a joy . . . it's a good airplane. I'm just tickled to death with it."

And, as mentioned earlier, the judges at Camden obviously thought just as highly of Vernon's restoration effort, awarding him the Grand Champion Antique trophy — out of a field of exceptionally fine, rare old airplanes that had shown up for judging.

Like many veteran restorers, Vernon has a few more projects in the wings. He has a Piper Colt he intends to convert into a tail-dragger for his wife, but his next project is the rebuilding of a Consolidated Vultee L-13. It's going to be strictly military — "There's nothing fancy you can do with that airplane, it's so ugly! So ugly it has appeal." Vernon also owns a new Super Cub for parts chasing and local transportation in his business as an avgas and jet fuel wholesaler.

"With the Cub, the L-13 and the Howard I'll have a pootin' around airplane, a playin' airplane and a goin' airplane!"





# BARBARA

... AND, INCIDENTALLY, HER WACO RNF, DAVIS, ETC.



The airport kid is one of the enduring legends of aviation — a youngster whose every fiber aches to fly, who haunts the local airport until someone hands him a broom and lets him sweep hangars for an airplane ride . . . and, later, flying lessons. Every airport had one in the 30's and it was a practice that continued until skyjacking brought us fences, guards and metal detectors to ruin everything.

And all of them weren't boys.

Barbara Kitchens was the very personification of the airport kid. She grew up in the little town of Black Mountain, North Carolina, right on the east face of the Appalachian chain. After World War II, a pilot named Red Nichols ran a little airport there, struggling mightily to eke out a living. He needed all the help he could get . . . and he got it from a

very unlikely source. A little girl began hanging around the place and after he found it did no good to chase her away — she just came back the next day — he took enough notice of her to realize she was absolutely crazy about airplanes. Pleased with someone so young who shared his interests, he not only allowed her to hang around — he put her to work. Naturally, he eventually had to give her a ride . . . and Barbara has been flying ever since.

She soloed on her 16th birthday . . . twice.

Sandy Hudson was an instructor who also flew out of Red's airport and he gave Barbara 4 hours in a Champ to prepare her for her **legal** solo . . . which she accomplished with the aplomb of a veteran pilot. Everyone around the airport knew Barbara would make another solo that day, this one illegally. She

had worked for Red for 4 years . . . and it was finally payday. He had a Clipwing Cub that he had dangled like a carrot in front of her for all that time and she had hung in there until the prize was hers. She flew **her** airplane that day, but because it was licensed in the Experimental Exhibition category, it was illegal for a student pilot to do so in those days. Knowing the full story, however, I doubt there was a CAA inspector in the land so hard-hearted that he would have written her up.

Barbara still has that Cub today.

She later moved to Greensboro, NC, married, had children . . . and continued flying. When we met her for the first time, in the late 1960s, she had just bought a Bonanza and was flying everything imaginable in order to pay for it. She was a go anywhere, anytime charter service; she hauled bodies for funeral homes (yes, at night, she tells people who **always** ask!) and she even hauled nails on occasion — special small nails for the furniture industry in Piedmont North Carolina. On one such flight, she struggled aloft with a thousand pounds of nails in the cabin!

That Bonanza was later severely damaged during a night landing on a private strip in eastern North Carolina. On rollout she struck a black angus cow — invisible in the darkness — that took a wing and landing gear right out. The airplane was rebuilt to work again, but was eventually sold. She owns another Bonanza today and still flies charter occasionally.

Life back on Mother Earth also had its ups and downs. Barbara and her first husband were divorced a number of years ago and she later married Bob Kitchens, an Eastern Airlines captain who shared her intense love of flying. They live on their own airstrip near Griffin, Georgia, just south of Atlanta.

Throughout her professional flying career, Barbara has also maintained a love for just plain fun flying. The fact is that even when she's flying for hire, it's still fun as far as she is concerned. She has dabbled in aerobatics, flying her Clipwing Cub to Rockford a number of times in the 60s to enter the aerobatic competitions held in conjunction with those early EAA conventions — events that later resulted in the formation of the International Aerobatic Club.

But even more pervasive has been her involvement with antique airplanes. A member of what is now EAA Antique/Classic Chapter 3 from its early days, she fell in love with open cockpit airplanes and flew them whenever the opportunity presented itself. When Wings and Wheels Museum closed its doors in Santee, South Carolina in the mid-70s and was looking for hangar space for a number of its flyable antiques, Barbara and Bob took in the outfit's Continental A-65 powered Curtiss Junior. She flew it to area fly-ins for a



number of years and ended up buying the airplane. Then, when Wings and Wheels reopened in the late 70s at Orlando, she and Bob ferried a lot of the airplanes from the Carolinas to Florida. They also made themselves available for flying the museum's prize antiques to fly-ins at which owner Dolph Overton chose to display them. Barbara's favorite was a stunning 1929 Command-Aire 3C-3A, and as a result of flying it to Sun 'N Fun in 1979, where it was voted Grand Champion, she and the airplane wound up on the cover of the April '79 issue of EAA's magazine, **Sport Aviation**.

Sadly, Barbara and Bob would have the task of flying a number of those aircraft back to the Carolinas when Wings and Wheels closed for good a couple of years ago.

About the same time, Barbara was getting into a new business, one that has made increasing demands on her time as it has become more and more successful. She began towing banners in the greater Atlanta area and has flown over 700 hours in the past two years alone over Atlanta Braves and Falcon games, Georgia Tech and Georgia (at nearby Athens) football games, as well as just around the city, itself. She has just bought her second Super Cub, a new 180 horsepower model, and, ironically, is finding it tougher and tougher to get away to attend fly-ins. The Saturday we interviewed her for this article, she was passing up 4 tows to attend the Camden, SC Fall Fly-In.

In recent months, Barbara's business has brought her some much deserved notoriety as well as continued financial reward. She has been featured on Atlanta TV and in the widely read Atlanta Journal. One of the things that fascinated the TV and newspaper reporters was the fact that Barbara has a ground crew composed of her three children. They make up the banners and set them up for her to yank off the ground with her Super Cub. It's something that must be done with very great care, otherwise the banner will be ripped apart as it is jerked skyward. So far,

Barbara laughs, they have done a great job . . . except for the time they misspelled a word!

The banner towing business has paid off in still another way for Barbara — it has allowed her to purchase the Waco RNF you see pictured here. She flew it to Camden and had it out in the fly-by pattern all weekend.

This particular RNF has spent just about all its 52 years in the Southeast — mostly in North Carolina. It was owned for years by L. T. Looper of Charlotte, who, in turn, sold it to Fred Simmons of Shelby, NC. Barbara bought it from Fred. The airplane had been inactive for quite a while, so it was necessary to make an initial decision whether to ferry it home to Georgia or dismantle it and haul it south on a trailer. Flying won out, naturally, so a lot of effort was expended to get the ol' bird going again. It was hangared on Fred's private strip, located 6 miles from the Shelby Municipal Airport . . . a fact I mention because that's how far the Waco was flown the first 3 days of Barbara's possession of the thing! It limped in to Shelby . . . and promptly lost a wheel on roll out. We'll spare you readers the gruesome details of the rest of the ferry flight(s) . . . suffice it to say, the Kitchens finally did get it home.

The airplane has been put in good running condition and licensed, but has not been given a complete restoration by any means. Its 145 Warner liberally lubricates the fuselage and windshields on every flight, but keeps on chuff-chuffin' along. Barbara loves the Waco, Warner "sauce" and all, and even uses it on occasion to tow a banner. By the time of the Camden fly-in, she had managed to accumulate about 50 hours in its rear 'pit.

All told, Barbara has well over 10,000 hours of logged flying time. She has nearly 6,000 hours in Bonanzas — a lot of it at night and on the gages. She has a Commercial license with Instrument and Multi-engine ratings.

So much of her time is spent aloft, in fact,

that she has had to take in a partner in still another antique project she owns. Several years ago, Barbara bought the wreckage of a Warner powered Davis D-1W, but has not found the time to do anything with it. Now, she has joined forces with Dr. Roy Wicker of Quitman, GA to get this rare machine back in the air and on the fly-in circuit. Roy is a highly respected sportplane builder/restorer, with a World War I Nieuport replica and several antiques (Fleet, Airmaster) to his credit. He was at Camden in his latest effort, a beautiful Marquart Charger.

The Davis, NC 13576, has quite a pedigree. It was the personal airplane of Walter C. Davis, president of Davis Aircraft Corporation of Richmond, Indiana and was known as the "Whistler II". It won its class in the 1934 Miami Air Races at a speed of 134.76 mph and with Art Chester as its pilot, also won the aerobatic competition. Later, it was owned by movie star Richard Arlen and appeared in several movies . . . and many of the movie stars of the 30s who were pilots are said to have flown it. Unfortunately, it has been a hard luck ship of late. It belonged to K. D. Wright of Atlanta in the late 60s, but was pretty severely damaged by another pilot who ran out of gas just short of the runway at Gastonia, NC. Rebuilt to show condition in the 70s by Bill Grant at Camden, SC, its new owners tragically and ironically spun in on final on their very first flight . . . trying to stretch their glide after running out of gas!

I'm confident Barbara and Roy will be the charm for the Davis and will have it out winning trophies again in the not too distant future.

Like most of us sportsman pilots, Barbara Kitchens would like to own at least one example of every airplane ever built. Finding that moderately impractical, she is settling for 7 of them at present. But, then, if the banner towing business keeps doing well . . . well!







G. L. SMITH'S

# MONI

How many times have you looked closely at the sea of faces at an EAA or AAA fly-in and realized that sport aviation is NOT a young man's game? Most of the people you see — particularly the aircraft owners — are obviously in their 40s and 50s. Some are younger, of course, and some are older, but the happy medium is decidedly middle-aged. What does it all mean? Is sport aviation drifting into senility, a "last man" brotherhood destined for oblivion?

Hardly.

Sport aviation always has been and, in all likelihood, always will be a middle-ager's game. It continues to thrive, indeed to steadily grow, because middle age is the **entry** level . . . and these days in the USA, there are more persons achieving middle age each year than there are young people turning 16. If sport aviation ever does decline in numbers of participants, it probably will be when the children born in the late '70s and early '80s . . . in the Age of the Pill . . . reach their 40s. There will just be fewer of them.

But why does the typical sportsman pilot **enter** the sport in his 40s? For an answer, consider the subject of this article, G. L. Smith of Bennettsville, South Carolina — a virtual textbook example of the genre.

A lifelong resident of Bennettsville, G. L. was stricken with the flying bug while still a child. He had saved enough money by the time he was 17 to start riding his homemade motorbike to the local airport for flying lessons. After 6 or 7 hours of dual, he left home to enter North Carolina State at Raleigh, NC, where he finally soloed a Cub. Whenever he could afford it, he continued to add an hour here and there, logging time in Cubs, Taylorcrafts and Luscombes.

After college, however, he came home to Bennettsville, got married, began raising a family . . . AND QUIT FLYING FOR 20 YEARS.

"After I got through paying for the business and got all the kids through school, I felt like I could take up flying again," G. L. told me when I interviewed him for this article. Now, how many of you folks reading this could take the preceding couple of paragraphs, substitute your name, change a few places and minor circumstances and have it describe **your** career? A bunch of you, I'm certain . . . in fact, if I had a hundred bucks for every person I've interviewed over the past 20 years with a similar story, you'd see Golda and I roaring into your local fly-in each year in the finest Staggerwing that ever saw the light of day!

Anyway, the reason sportsman pilots typically enter the game in their middle years is simply because they typically marry early in their working careers when they aren't making enough money to start a household, raise children **and** fly. And being the responsible type of persons they are, they either postpone getting into flying initially or, as in G. L.'s case, resume flying **after** their children have left the nest and, at last, there's some of those discretionary bucks for ol' dad . . . or, increasingly, ol' mom . . . to have that flying fling.

And thus it will be as long as people live the sort of family lives most do . . . and thus it will be that sport aviation will continue to thrive, even if its participants do continue to be a little gray around the temples. Actually, it's a situation that has probably been a plus for aviation. Being mature, responsible people, the great majority of lightplane own-

ers have carried those characteristics and attitudes over into their flying. The safety record of private pilots certainly is far from perfect, but think of what it would be if populated largely by . . . well, you pick your own least favorite group of unsavory citizens — and shudder at the prospect!

Actually, G. L. Smith's story adds still another dimension to the life and times of the typical sportsman pilot, and may well be pointing toward a path a lot more of you will soon be following. After becoming a born again student pilot, earning his Private ticket and owning several spam cans, he finally settled on a Taylorcraft as the airplane he really enjoyed flying. He kept it for nearly 8 years, then sold it and QUIT FLYING AGAIN.

This time it wasn't a matter of money. In his mid-50s, G. L. began to take stock of his flying career and look . . . **really** look . . . at what had been happening. In the first place, he was not flying a lot — maybe 15 to 20 hours a year. But when he did fly, sometimes he ended up sticking out his neck further than he knew he should. Flying to Oshkosh or Sun 'N Fun from South Carolina often involved scud running over swamps, mountains and dense forests that offered little hope of a successful forced landing in their midst. And even more chilling was the unusual circumstance in which all 4 instructors G. L. had employed over the years had died in airplane accidents . . . mostly due to bad weather. He just figured he had pushed his luck far enough, so he quit . . . but not for long.

In the fall of 1981, G. L. read about John Monnett's new Moni and instantly recognized in it the answer to his very real concerns. His principal enjoyment was simply



flying — not necessarily for any purpose, just flying for the sake of viewing our home planet from enough distance to diminish its problems and up-close ugliness past the vanishing point. This he could do in the Moni for an almost laughable pittance per hour in operating cost, and when he wanted to attend a fly-in, he could hook the airplane's trailer behind his station wagon, zip right on under any stinko weather to his destination and, once there, would have the pleasure of both his wings for fly-bys and his wheels for running to and from motels, restaurants and wherever else he needed to go.

In short, it was the sport plane of his dreams.

G. L. was one of the first persons to purchase a Moni kit — serial number 5 to be precise. He took delivery of his kit in June of 1982 but waited around until Fall to really get going on it. He had read in the Monnett newsletter (Monink) that a proof-of-concept example of the kit airplane was under construction at the Monnett facility at Oshkosh, so he decided to let them work all the bugs out before he committed himself to the task.

Beginning work in late summer, G. L. was ready for the preliminary FAA inspection in August, and, in late September, bonded his first wing. He went to work on the second one the following March after returning from Sun 'N Fun.

For those of you not familiar with the construction of the Moni, its wings (left and right panels) have just one long metal skin wrapping completely around the airfoil. It attaches to the ribs and spars by means of structural bonding — they're glued on, in other words. Only a few rivets are used to avoid peeling, which is the most likely failure mode of a bonded joint. The trick is providing even pressure to all mating surfaces while the adhesive cures. Initially, the building instructions recommended holding the skins in place with sand bags, but later the company newsletter offered an alternative method — vacuum bagging. G. L. used the sand bags — and really piled them on. He feels this was necessary to obtain an even pressure up and down each bond line.

G. L.'s Moni was built in a loft he constructed in his lawn and garden business quarters for that specific purpose. He thought it would be handy — and fun — to end a business day and go right to work on the airplane. Handy it was, but not fun, he

soon realized. The major part of his business is sales and service of chain saws and after a day of overhauling those 2-cycle sawdust makers, it was too much like more of the same to continue into the evening on the Moni. The result was that he quit for a time when the weather turned cold. That's when all the wood cutters bring in their chain saws for maintenance and overhaul, so the long hours then just proved to be too much.

With the onset of spring — and with the wood cutters back in the forests — G. L. could get back on the Moni. He worked pretty steadily right through spring and summer and, finally, after about 600 hours of labor, had it ready to take to a local paint shop. "I had done all the work I wanted to do on it," G. L. says, so he let a pro apply the Alumigrip (and Imron trim).

There were no real construction problems, he recalls. The kit was complete down to the last screw and the building instructions both complete and easy to follow. He built the Moni as per plans, except for the use of a standard aircraft compass instead of the smaller unit offered by Monnett and the use of 2 nicad batteries from a Snapper lawn mower instead of the kit's gell cell.

The installation and initial operation of the KFM engine was easy enough for a person who makes his living working on 2-cycle engines. G. L. thinks it's a fine little powerplant and is particularly impressed with its ease of starting.

Finally, in September of last year, the Moni was ready to try its wings. G. L. did a lot of the usual taxi testing and flights in ground effect — with but one incident. He dropped it in on an early landing and broke the plastic wheel supplied in the kit. John Monnett already had an optional steel wheel by this time, so one was ordered and has proven to be more than a match for dirt runway operations.

Finally, however, it was time to fly — and fly they did. It was all rather anticlimatic, G. L. recalls. There were no butterflies and no problems. The Moni flew as it was supposed to and that was that.

By the time of the Camden, SC fly-in in mid-October, G. L. had logged 16 hours in the Moni and was more than pleased with it. he's ghosted along at 50 mph and he's had it up to 110 indicated. He has flown it as a sailplane with the KFM shut down. In all flight regimes, the airplane handles predictably

and well, he says. In attempting to stall it, the indicated airspeed has been bled off to around 40 indicated, at which point the Moni simply begins to mush in a nose up attitude — doesn't drop a wing and doesn't nod its nose up and down as some airplanes do. With any easing off of back pressure, it's flying again.

The airframe is clean and it does take a little more attention to approach speed than higher drag spam cans. The speed brakes (built into the trailing edge of the main gear leg fairing) are very effective, however, in cutting down on the tendency to float.

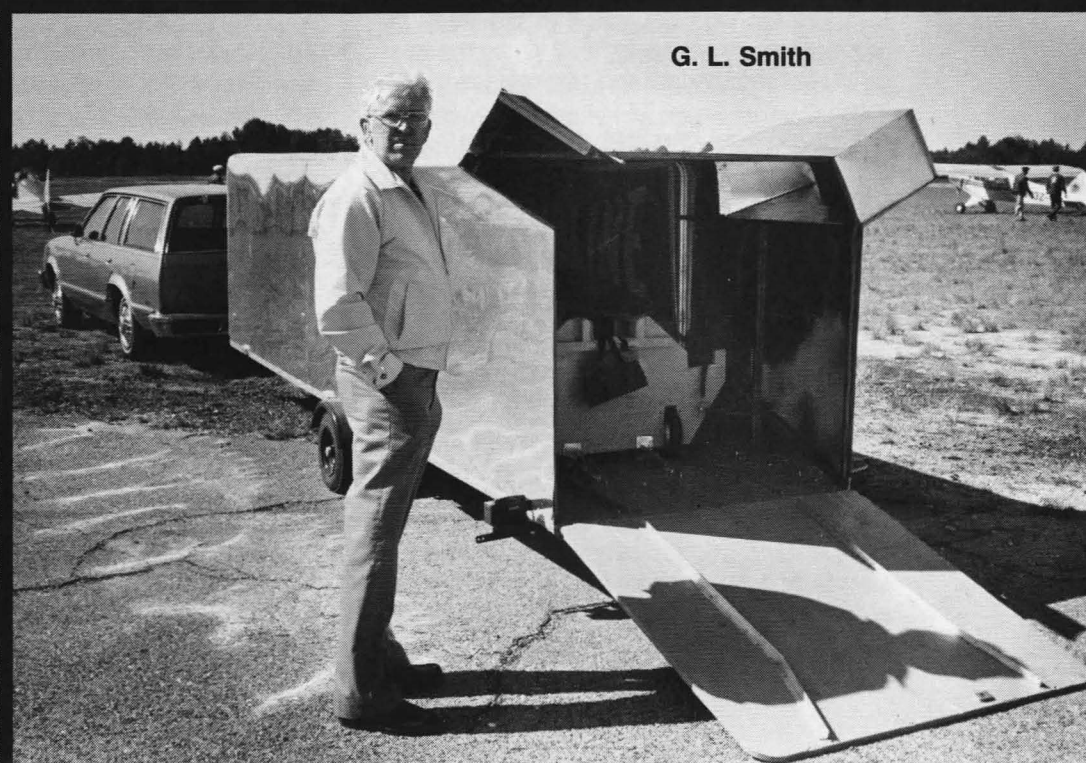
"I really can't find fault with the airplane. I'm a great promoter of John Monnett and his work because I believe in the kind of airplanes he builds . . . planes that are ideal for sport pilots."

Unfortunately, we did not get the opportunity to see G. L.'s Moni fly. He pulled it to Camden behind his station wagon . . . in its special trailer he built from Monnett plans . . . intending to demonstrate it during the fly-in. Upon opening the trailer's door, however, he found to his dismay that his fuel can had dislodged sometime during the trip and had knocked a chunk out of his prop. Perhaps it was a blessing in disguise, because the Moni was surrounded by the fly-in's largest crowds all weekend and G. L. was talked completely out when it was over. Had he been able to fly the sleek little bird, he would have been mobbed!

The trailer serves as the Moni's hangar and is stored in his three bay carport with the family cars. G. L. thus pays no hangar rent; he can work on the airplane when he wants to; he does his own annuals (he has the FAA Repairman's certificate); he can tow it out to the airport, remove it from the trailer and have it ready to fly in just minutes; he can fly literally for pocket change per hour . . . on auto gas . . . and he can tow it to fly-ins and not worry about getting weathered in somewhere.

"It's just perfect for me — for the kind of flying I want to do at this point in my life," says this born-a-third-time sportsman pilot.

If you are a recent subscriber to **Sportsman Pilot**, you may not be aware that the Moni was written up for the first time on these pages. We felt it would be just the ticket for many of you and now, a couple of years later, we're pleased to see we were right for once! ☺



G. L. Smith



# ED GARBER'S *Heath Super Parasol*



Dr. Ed Garber grew into manhood during the Great Depression . . . which means his impressionable years were those of the Lindbergh Era, Black Friday on Wall Street and in the early 30s, the onset of hard times. It was a time of trauma for the aircraft industry, a time when the big biplanes of the 20s became too expensive to fly and so were replaced by a new generation of low powered "flivvers" — Aeronca C-2s and 3s, Curtiss Juniors, American Eaglets and the like. In 1936, Ed won his wings in the most famous of them all — an E-2 Cub, the progenitor of the longest line of airplanes in history.

After college, medical school, the Army, internship and, finally, private practice, Ed resumed his flying and ultimately progressed to ownership of a Cessna 310. But while transportation airplanes widened his travel opportunities and mastering all the electronic bells and whistles of the IFR environment was an absorbing challenge, something was lacking. Missing somehow was the elemental wonder of flight he had experienced when he had begun flying in the E-2. Just getting an A-40 powered Cub off on a hot day and coaxing it into a climb was a miracle of sorts, an experience that never seemed to fade in his memory, so that after a time it seemed fresher and more recent than events that had actually taken place more recently. Ed knew

he couldn't turn back the clock, but he certainly could recreate the machines of his youth. He could build his own sort of time machine and at least occasionally time warp himself back to an era when flying was still a wonderment.

In succession, Ed restored a 1936 Aeronca C-3 Master, a Curtiss CW-1 Junior and a Henderson powered Heath Super Parasol. All were flown frequently, were displayed at fly-ins and each won a number of trophies and awards. He still has the Henderson Heath, but a lack of hangar space in his hometown of Fayetteville, NC forced him to sell the C-3 and CW-1 a number of years ago.

The tiny Heath was a pure delight — the more elemental the machine, the more fun it seemed to be for Ed — but it had its limitations. The Henderson engine has a well known propensity for parting company with its propeller, a fact that definitely puts a damper on one's desire to go cross country in the airplane. To have **and** eat his cake, Ed decided he needed another Heath — one with a more reliable engine.

He had already been keeping track of another Heath and finally the time seemed propitious to make an attempt to purchase it. It had been built in 1932 by a couple of Minnesota farmers, the brothers Perschau, and somehow survived to end up in the

hands of Dale Benskin, a member of the board of directors of the Air Power Museum Foundation of Blakesburg, Iowa. After a time, Benskin sold it to another well known Iowa antiquer, John Edgren, and he, in turn, agreed to sell it to Ed.

The Heath was literally a basket case — a fuselage, some landing gear and tail section pieces and a pile of assorted wing fittings . . . heavy, crude fittings that Ed is certain must have been hammered out in a blacksmith shop. He believes the airplane was built from Heath plans — and a lot of original ideas of the Perschau brothers. This is particularly evident in the landing gear, a sort of miniature Cub-type shock cord gear.

The steel tube fuselage is wire braced up to the cockpit where it becomes a welded tubular truss forward to the firewall. It was carefully inspected, rewelded when necessary, cleaned up and painted. The tail feathers got the same treatment, plus a little modification in shape.

Ed's biggest task was to build a new wing, struts, etc. Two small fuel tanks were built into the center section and interconnected, providing a total capacity of 9.4 gallons.

Wheels with mechanical brakes were obtained from Monnett Experimental Aircraft and fitted on the Heath so it would be more manageable on pavement — however, Ed says the little airplane steers so well with just





Photo by Goida Cox



rudder and tailwheel, that brakes are seldom used.

Once completed, the airframe was covered with Stits fabric and finished in enamel. The paint scheme is patterned after one from the early Heath years, preserved for posterity in an old photograph.

The engine, however, is what sets this Heath apart. It is powered by a Continental A-40, which produces a literal stampede in so light an airframe when Ed lays the lash to it for take-off. Rated at 37 hp at 2500 rpm, the single ignition A-40 is a flat four with a one-piece head for both cylinders on each side. It is a L-head design which cuts down considerably on its total width. Introduced in 1931, the A-40 (there was a dual ignition version rated at 40 hp) began the flat-4 revolution that led to all the flat-4, -6 and -8 engines used in lightplanes today. It wasn't the first flat engine, but was the first one to be used in great numbers in an airplane.

Ed traded another famous lightplane engine for his A-40 — an Aeronca twin (didn't think to ask if it was an E-107 or E-113) — with famed antiquer, Andy Anderson of Mansfield, Missouri. As honest as a summer day is long, Andy told Ed he had no idea what condition the engine was in — it had been sitting on the floor of his shop for years. Its last use had been in a rescue mission. A Cub or something had force landed into a

nearby field years before and the engine was hauled over, installed and used to fly the plane out to an airport, Andy recalled, and it ran all right then.

That was good enough for Ed, so he made the trade. His faith in Andy was rewarded because when the engine was inspected, it was found to be in amazingly good condition. It runs strongly and uses very little oil. In fact, with the prop currently being used, the A-40 will over-rev if held wide open on take-off — right on out to 2700 rpm. Ed holds it back to 2500 and still gets excellent take-off performance. He cruises it at 2250, which produces a solid 75 mph — a figure checked time and again against Cubs, Champs, etc.

The airplane weighs 420 pounds empty (compared to 320 for Ed's Henderson powered Heath) and has a gross of 600. The stall, such as it is, comes at about 35 indicated. It just sort of buffets and mushes, never dropping a wing unless the controls are really crossed up, so it's rather difficult to pinpoint a true stall. Ed flies his landing approach at 50 or so and gradually bleeds off speed to touchdown.

Both of Ed's Heaths and his "big antique", a 1931 Stinson Jr., are now hangared at Bob Allen's new private airport near Fayetteville. We haven't had the pleasure of visiting it yet, but from all reports, it's a sport flier's paradise — a huge, beautifully smooth

sward of grass for a runway and a couple of large hangars full of antiques and other fun type airplanes. Among Bob's personal fleet are a G Model Staggerwing and a Spartan Executive, both of which were also at Camden.

This past Fall Ed flew his Heath from Fayetteville, NC to Camden, SC for the annual EAA Antique/Classic Chapter 3 Fly-In. He made the 100 mile trip in one hour and 15 minutes — with the aid of a little tailwind, he admitted. A hundred mile trip is hardly noteworthy in the 1980s, but keep in mind that it's sometime in the mid-1930s when Ed is aloft in the Heath. His rate-of-climb, speed, range, engine reliability, structural integrity, nav aids (compass, chart and eyeball), cockpit comfort, wing loading and consequent reaction to turbulence, etc., are no different than they were when the airframe and engine were built nearly 50 years ago. Not many Heaths were ever used for 100 mile flights, so it **was** an achievement of sorts for him to fly it to Camden . . . and when the fly-in was over on Sunday morning, we stood watching as he disappeared over the northern horizon — on the wing of Bob Armstrong's Grand Champion Aeronca Champ.

Just flying . . . for the pure wonderment of it all!







## LOU BOWMAN'S GRAND CHAMPION

# CUB

The Grand Champion Antique at last summer's MERFI Fly-In at Marion, Ohio was a beautiful 1941 Piper Cub, owned and restored by Lou Bowman of Blissfield, Michigan.

The airplane won the award on its own merits — it is a superb restoration from the standpoint of craftsmanship, and it picked up a near maximum number of points for historic authenticity. Only the Ceconite cover differed from what might have rolled off the production line at Lock Haven 42 years ago. This is one airplane, however, that has to share some of the glory with its restorer. Lou Bowman created his masterpiece from a wind damaged pile of junk considered so bad by its owner that he sold it to Lou for only a hundred bucks! The top of the cabin was totally destroyed, the tail surfaces were smashed and the engine was long gone. In short, it was on the critical list and in grave danger of being reclassified as terminal.

Lou picked up his "prize" in 1975 and immediately set to work. The tubular structure of the fuselage was rebuilt and the tail feathers were replaced by like-new components he managed to buy and trade for at various places around the Midwest.

The wings were totally rebuilt. New wood spars were made up, as were a new set of struts. Miraculously, the ribs had pretty largely survived the windstorm's havoc, so

that only 3 or 4 had to be replaced.

All new hardware, cables, tie rods, etc., were purchased and installed.

The only thing Lou farmed out was the engine. He bought a run-out Continental A-65 and had it rebuilt. It's somewhat unusual in that it is equipped with **two** impulse mags. Both are Eisemanns . . . and really make starting easy, Lou says. The prop is a new Sensenich 72" x 44", the same wooden "standard" prop that was available when the Cub was new.

A lot of items were purchased from Wag-Aero, including the complete upholstery set. Finally, the airframe was covered with Ceconite and painted in the obligatory Cub Yellow and black lightning stroke trim. The first flight was in February of 1982.

Lou's conversation piece is a placard on the instrument panel that reads, "Do not fly above 6,000 ft." His explanation is that the plane's altimeter is an antique he wanted to use simply because of its age. He had it rebuilt and was told by the instrument shop that a tooth on a cog was missing and if the airplane climbed to 7,000 feet, it would unwind itself and the instrument would then have to be taken apart again and reset. Lou made up the placard limiting altitude to 6,000 — so that if anyone he allows to fly the airplane goes higher and unwinds the altimeter, he or she has to have it rebuilt. At least

that's what he tells them . . . actually, it's all in fun.

The only non-standard instrument is a helicopter airspeed indicator. It reads so low that Lou gets an indication while taxiing.

As befits a Grand Champion, the Cub now enjoys a life of genteel retirement. It is flown purely for pleasure by Lou and his wife, Joey, more often than not late on long summer evenings when the air is still and the setting sun bathes the earth below in warm, soft light. It's an hour of tranquility, of lengthening shadows and deepening hues. It's the hour of the Cub.

Lou learned to fly in 1951 in a Luscombe. Shortly afterwards, he went into the service and was in Army aviation for 2 years — in Japan and Korea. He was a crew chief among other assignments. Once home in Michigan again, he settled into family life and did little flying for 10 years or so. Finally, however, the old urges became too insistent so he, along with 3 friends, bought a Cub and restored it to flying condition. With his aircraft maintenance background, Lou ended up doing a lion's share of the work. After flying the airplane for a while, the partnership broke up and the Cub was sold. That was when Lou came across his "bargain" and began restoring it to prize winning condition.

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We don't hear it as much today as we once did, but for the greater part of the past 50 years, the average person has referred to a small airplane . . . **any** small airplane . . . as a Piper Cub. No other airplane of any kind has ever enjoyed the universal **name** recognition of the Cub. Of course, not one in a thousand of those "average persons" would recognize one on sight, but they certainly know the name.

How did this happen? Of all the literally hundreds of different makes and models of airplanes that have been produced since that cold, blustery December day at Kitty Hawk, why the Cub?

The answer is simple — the Cub was the most assiduously promoted airplane that ever came down the pike. William T. Piper was a clever and tireless promoter who left no stone unturned when it came to getting his airplane into the public spotlight. He had one important thing going for him — aviation was front page copy throughout the 1930s when the Cub was growing up. But, mostly, it was imagination, hard work and a lot of brass that put "Piper Cub" indelibly into the public consciousness of a couple of generations.

There were all sorts of gimmicks — 8 hours of free dual with the purchase of every Cub, a factory air show touring team (yes!), free flying time for aviation writers, and shameless use of celebrities and public figures in advertising and promotional events. They even got Eleanor Roosevelt up in a Cub once . . . with flash bulbs popping all over the airport, naturally.

What I consider to be the real PR coups, however, were the following:

- In the 30s, cigarette merchants customarily threw in a little book of paper matches with each pack of Luckies, Camels, Wings or whatever — and untold millions of them had a Piper ad on the inside of the cover. Send in a dime and you got a Cub lapel pin. An entire generation of kids (your editor included) grew up proudly wearing the little bear on their collars . . . and with the name "Piper Cub" forever ingrained in their minds.

- Radio was truly the "opiate of the masses" in the 30s. It was the one form of entertainment almost everyone could afford in those hard depression years . . . and if you marvel at the addiction of your friends and neighbors for TV soap operas, don't think it was any less pervasive in radio's heyday. That's where the "soaps" began. It stands to reason then that if the public couldn't be torn away from their sets, especially in the evenings, if you could afford to advertise a product on radio, you were guaranteed an enormous audience. Piper did just that. The company that made Wings cigarettes was quite air-minded. Not only did they place an airplane picture card in each pack of cigs (which are valuable collector's items today), they also sponsored a radio program, broadcast nationally, called "Wings of Destiny". As a promotion to gain listeners, the company worked out a deal with Piper in which a new Cub was given away on the program EACH WEEK. Scheduled for a run of six months,

the give-away was so enormously popular . . . and successful for both Wings and Piper . . . that it stretched on for a year and a half.

Considering the size of the radio audience in those days, I have a feeling this promotion put "Piper Cub" into more minds than any other single effort.

- The 1939 World's Fair in New York City was one of the most widely ballyhooed public events in history, and one of the best attended. Guess what was mounted on a pedestal in front of the fair's aviation exhibit? A Cub, of course!

One of the fair's rules was that no price tags could appear on commercial products being displayed. This rubbed against the grain of the Piper sales effort, however, because one of their big advertising points was the \$995 price of the cheapest model of the Cub. They managed to get around fair management by obtaining the registration number NC 995 . . . and, son of a gun, if some boulder didn't sneak up and put a dollar sign over the NC on the tail number — which stayed on for the duration of the fair!

By the time of Pearl Harbor, almost everyone who could read or listen to radio knew what a Piper Cub was . . . so, in the war years that followed, everyone knew what Ike and General Patton, General Bradley and even Winston Churchill were put-putting around the front lines in. "L-4" was the Army designation — but to the rest of the world, they were just Piper Cubs.

Always Piper Cubs . . . forever Piper Cubs.







## MARK MAZZON'S **DRAGONFLY**

Every homebuilt airplane designer I know makes a conscientious effort to come up with a reasonable estimate on what it will cost, how long it will take and roughly how much difficulty one will experience in building his design. Ask any of them, however, and they'll tell you these three questions are the toughest things they face in marketing a homebuilt. The problem is that if they have 500 customers, they will have 500 different levels of native intelligence, of experience in the use of tools, of manual dexterity, patience and determination. Consequently, some builders will find the designer's estimates to be right on or, perhaps, even conservative. Others will be quite disappointed to find it takes them twice as long, twice as much money and maybe a good start on an ulcer to get the airplane in the air. Some simply can't hack it at all and end up abandoning their projects.

It's no one's fault, necessarily, it's just the sort of thing you have to expect when you deal with large numbers of people with diverse backgrounds.

With all this in mind, it's interesting to interview some of the very early builders of a new design. Interesting, because whether they recognize or accept the fact, they are a part of the initial learning curve. Inevitably, there will be errors and omissions — usually of a minor nature — even in the best plans or building instructions, and it is the early builder who finds them and reports them to the designer.

The Dragonfly has been on the market long enough now so that this past summer, the first batch began to show up at fly-ins to give the prototype some eagerly awaited company. One of them belonged to Mark Mazzon of Sunbury, Ohio. He finished his

just in time to fly it to Oshkosh and, the following month, to the MERFI Fly-In at Marion, Ohio. We caught up with him at MERFI and explained that we would like to have a no holds barred evaluation of his experiences with his Dragonfly . . . and he agreed to provide one.

First, then, let's look at a few aspects of Mark's background that might have affected his ability to build and fly the airplane.

- This was his first aircraft building project and he had no previous experience with foam and glass lay up.

- He works as a technical representative for Xerox in the Columbus, OH area, a non-aviation related job.

- He was a 1400 hour pilot when he began his test flights in the Dragonfly — with about 600 hours in tail draggers.

Mark ordered his plans from Dragonfly designer Bob Walters immediately after returning home from Oshkosh '81 . . . then called Wicks Aircraft and told them to ship the complete kit. He admits that he could have saved as much as \$1000 by scrounging for parts and materials, but he had set a goal of having the airplane flying within one year, so he obviously would not have time for scrounging.

Work began early in September of 1981 and within 8 months, he had the basic airframe built. He had made the various components in his basement, but had to move into his garage when the time came to begin the assembly process. It was then that Mark realized his one year deadline could not be met. He found that during the really cold months there was little work he could do on weekday evenings. By the time he got home from work and got his garage warm enough to use epoxy resin, it was too late to get anything done. As a result, the project

stretched out to 22 months, with the first flight coming in mid-July of 1983.

But enough of the big picture — let's get down to the nitty-gritty.

First, Mark found Bob Walters' plans/building instruction package to be "excellent".

"I ended up making about 5 calls to Bob on things. I was one of the first to actually begin building a Dragonfly, so 4 or 5 of the things I called about were later included in the newsletter . . . and thus helped subsequent builders. They weren't big items, just an angle off someplace, a dimension that had been omitted, etc., but Bob was good about getting them corrected right away. I got a lot of change notices from Bob in those early days, but most of them turned out to be clarifications of instructions — so you wouldn't have to re-read a section 3 times to understand it. Basically, the plans were really good and I was able to build the plane from them without any great problems.

"I can't say anything was really difficult to build. Probably the hardest thing was to get the canopy built and getting the cowling to fit the airframe. It wasn't a matter of not being able to understand the instructions for building these items, it was, rather, a matter of not having enough hands to hold things.

"The canopy normally swings to the side and was originally installed that way — but there was a problem. The plans-built Dragonflies have more of a curve in the sides of the fuselage than does the prototype, so you have a problem with the bow on the outside edge of the canopy digging into the airframe. To get around that, I just hinged it in the center so it would swing up and forward."

Mark said he still had some work to do in trying to figure out how to hold the canopy open — and as you can see in the pictures,



at Marion he was propping it up with a length of 2" x 4".

Before starting construction, Mark's greatest concern was the epoxy smell and the possibility of developing an allergy to it.

"I had a friend building a VariEze at the time and he was using the old Rutan epoxy. You could smell the resin from 50 feet, so I was afraid I would stink up the house during the time I was working in the basement. But the newer Safe-T-Poxy supplied with the Dragonfly kit (also Rutan today) has almost no smell to it. I had no allergy problems, even though I was rather lax about using any skin barrier. I did wear rubber gloves a lot, though."

Mark built his Dragonfly pretty much to the plans, except for the modified canopy already referred to and making the cover over the rear wing center section removable.

"According to the plans, that part of the fuselage skin is supposed to be glassed to the wing after it is installed. Once you set it in there, however, you can't get back in to work on any of the controls. Everything is in back of it. So, I just put a flange inside (the fuselage skin) and bolted the thing on. That way, if I have to work on anything, I can take out 9 screws and get at it."

And then there was the instrument panel. The prototype Dragonfly has the bare minimum of instrumentation needed for day VFR flying, because that's what Bob Walters intended the airplane to be — an economical little fun airplane, with excellent VFR cross country capability. Lives there a builder, however, who can resist the temptation to add a few goodies in the instrument panel? Mark couldn't — he installed NAV/COM, an ADF, transponder and a fairly complete set of flight instruments. He did hold the line on gyros, however.

Then, the airplane was given a nice polyurethane color finish. Mark weighed the paint he used while it was still in the can and it came to 40 pounds. He talked to the manufacturer (Ditzler) and was told that by weight the solids in polyurethane paint are a high percentage of the total weight. In other words, most of that 40 pounds would remain on the airplane after the paint dried.

Well, you all know what we've been leading up to here, don't you? When it was completed, Mark's Dragonfly weighed 705 pounds empty — about 100 pounds more than the prototype.

"I've got about 40 pounds in radios, strobes, turn coordinator — things that are not in the prototype — but there's another 60 pounds in there that I haven't quite figured out yet," Mark said at Marion.

Mark's Dragonfly is powered with a HAPI 1835cc VW conversion with starter, alternator and Tillotson carb. The prop is a 52" x 42" wooden beauty by Great American. There were no particular problems in installing the engine and it ran well from the beginning.

"I really didn't have too much of a problem flying the thing," Mark recalls. "I just went out and ran it up and down the runway a few times. I didn't want to do the runway flying they had recommended in the plans. I was on a 4,000 ft. runway and with this thing so clean, by the time you got it up to where it was ready to fly, it just didn't want to stop. 4,000 ft. just wasn't enough that I felt safe taking it off a couple of feet and then trying to land it. So, after I was satisfied with the

ground handling, I flew it . . . and stayed up long enough to get the feel of it. I made 3 approaches before I got it down, however. I wasn't used to sitting so close to the ground, so it was difficult to judge where the runway was for a 3-pointer. I finally just eased it on the mains with a little power and wheel landed. That was so easy I have pretty well stuck with the technique ever since."

The first flight occurred in mid-July of last summer, so Mark took off the next 3 weeks to prepare for and attend Oshkosh. He spent the first 2 flying off his 40 hours, got signed off by FAA — then headed for Wisconsin.

There were some annoyances . . . one of which involved this type of airplane's much talked about reaction to bugs and rain on the wing's leading edges. On the way to Oshkosh, for example, he picked up a good load of bugs and when he arrived for a planned stop at Valparaiso, IN, it was raining there. Before entering the pattern, Mark slowed the airplane down and found his stall speed was up about 15 mph. Significantly, however, he had noticed no difference at cruise. He made his normal wheel landing with no problem, but could tell he did not have enough up elevator left to have made a 3-pointer, had he tried one.

Of more concern to Mark than the bugs and rain phenomenon was his cruise speed . . . or lack of, as was the case. He was indicating only 150 or so at 3200 rpm, which was considerably less than the prototype's published figure. He also had a pitch stability problem. If the airplane departed — either way — from a trim speed, it just kept going, faster or slower. It would not return to its trimmed out speed on its own like a pitch stable airplane is supposed to.

After returning home from Oshkosh, Mark carefully remeasured the airframe and came to the conclusion that his rear wing was set at too high an angle of incidence — by about a degree, at least. He proceeded to lower the leading edge by that amount and got immediate results. He picked up nearly 10 miles per hour at 3200 rpm. Previously, the airplane had been flying straight and level with the elevators down nearly half an inch

— which, with a 20 ft. elevator, is a lot to be dragging through the air. With the wing incidence lowered, the elevators remained in trail at cruise, as they were supposed to. Mark now recognizes the problem as a simple matter of getting his airframe in proper rig — a common problem even with new factory airplanes — but it was perplexing at the time.

The rate of climb has been a mild disappointment for Mark. At gross weight, he was seeing between 400 and 500 fpm in last summer's heat. Solo and with a full load of fuel (16.5 gallons), he saw between 600 and 700 fpm. All airplanes are compromises, however, and some rate of climb is what one must give up in the Dragonfly to achieve its outstanding economy and high cruise speed using so small an engine and a fixed prop, Mark acknowledges.

All things considered, however, Mark is quite pleased with his Dragonfly. To recapitulate, he thought the plans were excellent, he got prompt builder support from Bob Walters (who subsequently sold the Dragonfly rights to Rex Taylor) and he had no difficulty flying the airplane. He did encounter a performance degradation in rain and with bugs on the wing's leading edges, but only at low speeds and never to the extent that handling of the airplane became critical. He was disappointed with his cruise speed at first, but after re-rigging the rear wing, solved that glitch. The rate of climb he'll just live with, he says.

Mark found the Dragonfly relatively easy to build and says, "I would definitely go with another plastic airplane if I were to build another one." It cost more and took longer to build than he had anticipated, but some of the causative factors were of his own doing — like the added electrical goodies, a new engine, etc. — and some were beyond his control — like cold weather.

Mark had logged about 50 hours on his airplane when I talked to him at Marion last summer. I'll try to meet with him again later to get a "Dragonfly at 200 hours" type of follow-up. Should be interesting.





## JOHN MCCLAIN'S

# KR-2

A few years ago the Experimental Aircraft Association worked with FAA to create a Repairman's Certificate for persons who build their own airplanes. What it amounts to is a sort of very limited A&P license, permitting the builder to do his own maintenance and annuals. The limitation is that he can work on the airplane he (or she) built . . . period. The license has been an unqualified success for all concerned — it cuts down greatly on FAA's workload, thereby saving the taxpayers a bunch of bucks, and it saves the builder the paperwork and delays involved with getting a FAA inspector to look at his airplane each year.

Best of all, it has caused a lot of people to decide to build an airplane who might not have done so otherwise. Being almost totally independent of bureaucratic involvement once one's homebuilt is initially signed off is apparently an even greater incentive to build than either EAA or FAA anticipated.

Take John McClain of Mechanicstown, Ohio as a case in point. He has been flying for 45 years but has owned just one airplane outright during those 4½ decades. After soloing a 40 horse Taylorcraft in 1938, he bought half interest in a Rearwin Sportster — which was sold in 1942 when he answered his country's call to service. He never owned another until it was possible for him to build, maintain and license his own. "Semi-retired", he says it is essential that he keep his flying expenses to the minimum and the existence of a Repairman's Certificate was a great incentive for him to complete his project, a much modified KR-2.

John bought his plans and a materials kit in 1976, but work on the KR progressed in fits and spurts until October of 1982. That winter and the following spring, he really got with the program and was able to fly the tiny 2-placer for the first time on July 2, 1983 . . . from his 2,000 ft. grass runway.

His KR-2 is powered by a Revmaster 2100D fitted with every available accessory

except the turbocharger — geared starter, oil filter, large oil radiator, dual mags, mechanical fuel pump, etc. He also installed a back-up electric fuel pump under the seat. The engine swings a 52" x 52" Warnke propeller.

John's cowling is his own design. He had subscribed to the KR Newsletter when it became available and tried to benefit from the experience of those further along than he was. Some of the early builders experienced cooling problems, so John made a study of cowling design in an effort to avoid the condition in his airplane. He ultimately settled on a John Thorp/T-18 solution, a cowling configuration in which the cooling air is exhausted through outlets on each side of the fuselage. This is a low pressure area (on flat sided fuselages) that naturally augments the extraction of the cooling air. It works well on the KR-2.

John did initially have higher oil temperature readings than he wanted, but by the simple expedient of adding a small lip to the oil radiator's air inlet, the problem was solved.

A lot of changes, additions and just plain tedious work went into the cockpit area, the most obvious of which are a fixed windshield and a set of gull wing doors. Inside are all sorts of goodies: a console between the seats containing the trim tab control, flap handle and fuel valves. Ahead of the seats is a positive locking landing gear handle. The gear retraction locking mechanism is fitted with a microswitch that activates a green light to indicate "down and locked". If the gear isn't locked, a red light comes on and a loud horn sounds when the throttle is retarded.

Even further down in the floor is a set of heel brakes. They replace the rudimentary "pull cable" system shown in the KR plans. John used the wheels and mechanical brakes that came with the kit and with the mechanical advantage he built into his heel pedals, can slide the wheels — so far, with-

out getting a prop.

The landing gear, itself, has been fitted with an additional, free swinging fairing that blows up to streamline the legs when they retract.

John's wings also came in for their share of modification. They have flaps, integral fuel tanks and low drag tips. The flaps are mechanical and go down as much as 57 degrees — which may be a little too much because in that position they are almost touching the ground when the airplane is on the runway. John uses 45 degrees for landing and says it provides a highly desirable nose down attitude on approach. Due to the pilot's low seating position, a KR-2 is blind as a bat straight ahead when the tail is down, so with the flaps, John has to revert to the Braille System only in the flare. If he wheels it on, he avoids the problem altogether.

Each outboard wing panel contains a built-in 14 gallon fuel tank, both of which feed into a 5 gallon header tank in the fuselage. An electric pump keeps the header tank full . . . and the aforementioned engine driven fuel pump feeds the Revmaster. A system containing 2 selector valves, one in the incoming line and the other in a return line, allows John to manage his fuel to keep the airplane in lateral trim.

As you can see in the pictures, John's KR has non-standard wing tips — a sort of clipped apex triangle similar to those Steve Wittman has developed for his Tailwind and VW racer. The intent is to mitigate the effect of tip vortices and, of course, realize the benefits of a little additional wing area and aspect ratio. John admits that since he has never flown a KR-2 without the tips, he has no way of really knowing how well they work — or even if at all. He does know he's experiencing extremely docile stall characteristics, good aileron response for as long as the plane is in the air and a good rate of climb — so maybe the tips are working for him.

In anticipation of good speeds, John built



in mass balance for his ailerons and aerodynamic balance "ears" for the rudder and aileron. Provision was made for adding mass balance to these surfaces, also, but the weights have yet to be installed.

The KR-2 was the first of the "composite" homebuilts so common today. Designers Ken Rand and Stu Robinson drew heavily from their RC model airplane experience to develop an airframe composed of wood, foam and glass. Unlike the later designs of Burt Rutan in which foam, glass and resin are used in primary, load bearing members (and almost everything else, for that matter), the KR-1 and -2 are actually wood airplanes with foam and glass utilized largely for fairing. The wing and tail spars are wood and the fuselage is a traditional deHavilland plywood box. The foam and glass (actually Dynel on early KR's) does provide torsional strength in the wings and tail, so must be considered as a part of the primary structure.

John bought his kit when Dynel cloth was still supplied, so his airframe is covered with it (most builders use fiber glass cloth today). His cowling, however, is built up with 3 layers of 8 ounce glass cloth and epoxy resin.

Which brings up an unusual occurrence — one that threatened to shelve John's project at its midpoint. After he began working with the Dynel and resin, he began experiencing a problem with his hands. They broke out and all but bled. The condition was confined to his hands, which seemed strange to John since he always used rubber gloves when he worked with resin. He finally discovered he was allergic to the gloves — not the resin! A similar reaction described in the KR Newsletter by another builder was the tip-off. John later wrote his benefactor a nice letter, thanking him for saving his project.

After throwing away his rubber gloves and recovering from the rash, John finished the airplane using ordinary old cheap cotton work gloves. When a pair got so stiff they wouldn't bend, he simply threw them out and got new ones.

Once completed and running, the KR provided John with just one major preflight problem: his Westach electric tachometer went berserk when he cranked up the Revmaster, reading 4 times higher than it should have. How would you like a closed throttle idle of 3600 rpm! The installation instructions had been followed to the letter — and they **did** provide a solution for such an eventuality as John was experiencing. A wire in the back of the tach could be snipped in two to halve the rpm indication . . . but that still left his rpm twice as high as it was supposed to be. A call to Westach resulted in the solution — reverse the leads. He did and it worked.

John installed nav lights, which he intends to use only during twilight, and a landing light that's actually intended for daylight use when approaching a busy airport. The tiny KR is hard to see, especially head-on, so John wants to give other pilots a little help.

All the modifications came at a price, of course. The KR tipped the scales at a hefty 687 pounds . . . and John has set his gross at 1100 pounds. He had not yet flown the airplane with a passenger aboard when I interviewed him at Marion, Ohio last September, but he had flown with 100 pounds of ballast and about 18 gallons of fuel. He says he did not notice any great difference

in performance — perhaps an additional 50 feet or so of ground roll on take-off.

Single place, he gets off his turf strip in 550 to 600 feet and climbs out at 800 to 1000 fpm at 90 knots indicated. At 3000 rpm, cruise is 135 to 140 knots. Top speed is 160 at 3500 rpm.

Slowing the KR down, John begins to feel a buffet at 50 knots and at 45 the stick begins to shake. Pulling the stick on back to the stop, it just continues to shake and a 500 fpm rate of sink develops, but the airplane never pitches over. He had not tried to stall the airplane at extreme attitudes, but on the basis of his efforts at "normal" angles, John considers his KR to be quite docile.

He approaches at 60 knots — and gets a little float when he flares, even with full flaps. "I always seem to get the tailwheel on first — it will roll along and then the mains will flop down. It is very easy to control on the ground. I was afraid it might be squirrely because it is so short coupled, but, apparently, the gear geometry is about right, because it is no problem on the ground. The steerable



John McClain



tail wheel is all you need for directional control — don't need the brakes to keep it straight."

John had logged 41.4 hours when he left home to fly to Marion. The FAA had signed the airplane off the previous day, so it was being seen by the fly-in public for the first time the day of our interview — the engine was still warm when we were talking, as a matter of fact. John was very complimentary of the FAA people with whom he dealt during the construction and flight testing of the airplane — which is something I hear all over the U.S. A lot of us have our differences with FAA policy and regulations, but the face-to-face dealings homebuilders have with local FAA inspectors appear to be overwhelmingly good, based on what builders tell me.

John had no hairy tales to tell about his first or subsequent flights, which is to be expected when you learn that he was a Navy TBM pilot during World War II and a Taylorcraft production test pilot in 1946 — until the company folded and moved away from Alliance, Ohio. He had worked for Taylorcraft before the war, also, but as a worker on the production line.


After Taylorcraft folded, John's flying became just an occasional thing until he got the KR going. It took 45 years, but his goal of aircraft ownership and being able to fly pretty much at will has finally been realized. He has his own strip on 26 acres . . . and at 64 is looking forward to a lot of dream fulfillment in the years ahead.

I hope he wears out several Revmasters!





# BILL NYIRI'S *REARWIN SPORTSTER*



The hobby of preserving and flying antique airplanes had its formal beginning in 1953 when Bob Taylor formed the Antique Airplane Association. One of the very earliest participants in the activity was Bill Nyiri of Seven Hills (Cleveland), Ohio. He had bought a basketcase 1935 Rearwin Sportster in 1948, had restored it and was routinely flying it all over the midwest and occasionally well beyond when AAA got its start out in

Iowa.

To the pleasant surprise of everyone who comes across it at a fly-in these days, Bill **still** owns and flies the Sportster.

Think of it — the airplane will be 49 years old sometime in 1984; Bill has owned it for the past 36 years and, except for being down for 3 cover jobs and one engine change, the ol' bird has been in continuous use over that period of time. Can anyone challenge that?





Do any of you know of a pilot who has operated an airplane that old for as many continuous years? If you do, let us know and we'll spotlight the plane and pilot in Kaleidoscope. If it's not Bill Nyiri, let's ferret out the "oldest airplane/longest continuous use" champ and give him (or her) a round of literary applause.

Bill Nyiri learned to fly when he was 17. His brother was his instructor and his trainer was a Ryan STA.

"I didn't start with a Cub, like most pilots of the late 30s, and then move up to a STA, I started with the STA and later moved down to a Cub," Bill laughs today.

A paratrooper in World War II, Bill survived to take up flying again in the late 40s. He found the parts and pieces of the Rearwin near Ft. Wayne, IN in 1948 and proceeded to haul them home and begin rebuilding the mess. The airplane, NC15801, Serial Number 437, was built by Rearwin Airplanes, Inc. of Kansas City, MO as a Model 7000, powered with a five cylinder, 70 horsepower LeBlond 5DE radial engine. It was in that configuration when Bill bought it. Later, however, he installed a 90 hp LeBlond. The factory had made the same change in 1936, along with a few airframe improvements, and redesignated the airplane the Model 9000-L. The vertical fin and rudder were enlarged a bit and changed to a more rounded shape and a "speed ring" cowling was offered as an option. Bill's Sportster still looks like a 7000 but has the get up and go of the 9000-L. It has a blue fuselage and yellow wings and horizontal tail, plus a production line standard trim scheme.

15801 has not been a hangar queen. Bill has flown it from the Strongsville Airport where it is hangared to Seattle, Portland, OR, to Texas . . . and, over the years, about every fly-in held in the Midwest. He has also owned Cubs, Luscombes, Cessna 140s and has belonged to a couple of multi-engine clubs during the 36 years he's owned the Rearwin, but the rest of them have ultimately been sold. The Rearwin simply became too much a part of the family to be cast off like a used car. All his children grew up riding in it and now the grandchildren are getting their turns.

It rankles Bill a bit for the uninitiated to refer to his Rearwin as a "Cub" or to imagine it to have similar characteristics.

"Try lifting the tail and you'll see it isn't a Cub."

And it isn't. N15801 weighs 950 pounds empty (to an average Cub's 640 or so) and grosses at 1450. When originally designed, the Rearwin was intended to be a little more airplane than the C-3s, Curtiss Juniors and E-2s of the day . . . something in which pilots accustomed to the bigger, heavier biplanes of the late 30s would feel more comfortable. Cruise with the 90 hp LeBlond is 90 mph and it lands at 55.

All told, about 260 Rearwin Sportsters were built from 1935 to 1941 before the company switched over to producing the more modern Cloudster.

15801 was last covered about 12 years ago, but it still looks good. If the past is anything to judge by, the ol' bird may be destined for several more suits of fabric and may well be showing up at fly-ins when all of us are pushing up daisies.

You can't wear an old tube and rag airplane out . . . just stick in some new bushings once in a while — and fly on! ☺

## More of CAMDEN '83



A beautiful Swift owned by Roland Richardson of Sumter, SC.



This "Navy" job is a superb Marquart Charger by Dr. Roy Wicker of Quitman, GA.

## KALEIDOSCOPE . . . Continued

### BY STORK TO AUSTRALIA

1984 is the 50th anniversary year of the 1934 England to Australia MacRobertson Air Race. Considerable effort has been made to restore the winning deHavilland 88 Comet, Grosvenor House, to flying condition sometime during the year . . . in fact, at one time there was hope the racer would make a commemorative flight to Australia. If it does, however, it will come in second this time around. On December 18 a DC-2, restored to the configuration and markings of the runner-up aircraft in 1934, took off from Mildenhall, England bound for Melbourne, Australia. Finished to look like the "Uiver" (Stork) by KLM and flown by a KLM crew, the ol' bird should be basking in the admiration of the Aussies by the time you are reading this. The DC-2 was borrowed by KLM from its owner, Colgate Darden of Cayce (Columbia), South Carolina. A nuclear physicist on the faculty of the University of South Carolina, "Coke" Darden has owned the DC-2 since the late 60s and had it on loan to the Wings and Wheels Museum in Orlando until it closed a couple of years ago. Coke also owns a Meyers OTW, a Spartan Executive and the only flyable Douglas Dolphin.

The DC-2 is N39165 . . . and your editor is proud of a log book entry dated 9-26-70 in which it is noted I got 15 minutes of right seat time in the big silver bird. My "remarks" entry reads: "Heavy on the controls. Indi-

cated 140 knots at 1850 rpm and 26 in. of manifold pressure."

### D. H. COMET . . . CONTINUED

And while we are on the MacRobertson race, the latest in the on-again, off-again restoration saga of the Grosvenor House is that the Shuttleworth Trust (its owner) has turned over the restoration work to the Royal Aircraft Establishment at Farnborough. The latest goal is to have the racer flying by October, the actual anniversary month of the 1934 race.

### DREADNOUGHT UPDATE

In a sort of "now it can be told" confessional, Frank Sanders tells us his Reno race winner, the R-4360 powered Sea Fury "Dreadnought", was suffering a lack of vertical tail area last summer . . . even as it was powering its way to a dramatic win over the fastest field of air racers ever assembled. An approximately one foot fin extension has been installed this winter and makes a tremendous difference, Frank says, particularly in the sort of turbulence experienced in the Unlimited Gold race last summer. For this and a few other reasons the Sanders will naturally keep to themselves, Dreadnought will be significantly faster for Reno '84 . . . which should make insomniacs out of their competitors between now and September!



# ALON A-4



You never know what you'll see at a fly-in - this Alon A-4 that turned up at Marion, OH last September, for instance. Designed by Alon, Inc. of McPherson, KS, one of the many manufacturers of the Ercoupe/Aircoupe/Cadet, etc., over the years, the A-4 prototype first flew on February 25, 1966. Essentially a 4-place Ercoupe with a conventional tail and 3-axis controls, it was powered

by a Lycoming O-320-A (150 hp). Span was 32 ft., length 23.5 and the empty weight was just 1,043 pounds - quite low for a 4-seater. Gross was 2,150 pounds. Max cruise was 150 mph and it stalled at 52 with the flaps down.

The A-4 at Marion has been restored by Carl Hall and George Skistimas of Bowling Green, Ohio. They bought it in September of

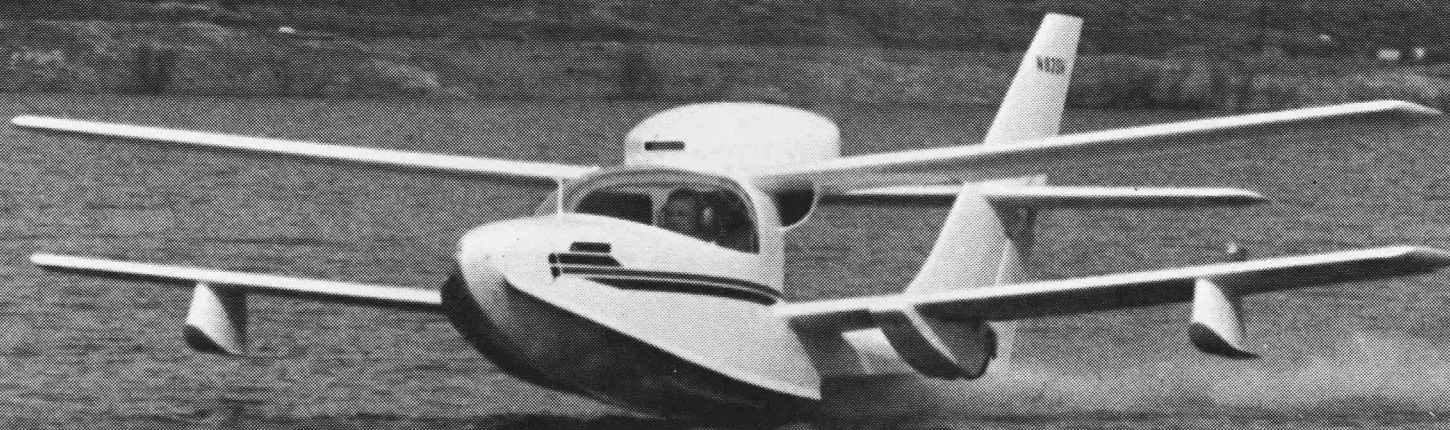
1982 in Hillsdale, Nebraska. Ercoupe enthusiasts, they spotted a lot of the 2-seater's structure in the A-4, especially in the fuselage and horizontal tail. It's a good performer, they said, with consistent 140-145 mph ground speeds.

Anyone know how many A-4s were built?



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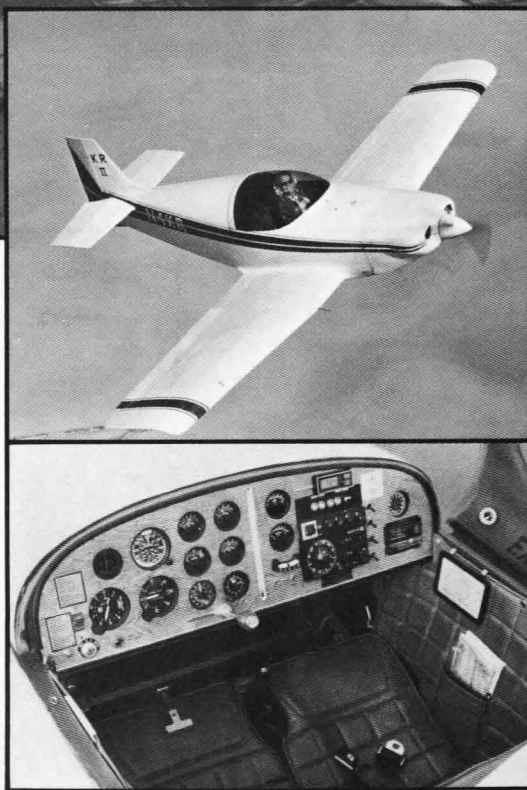
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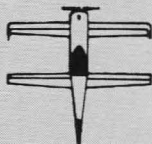
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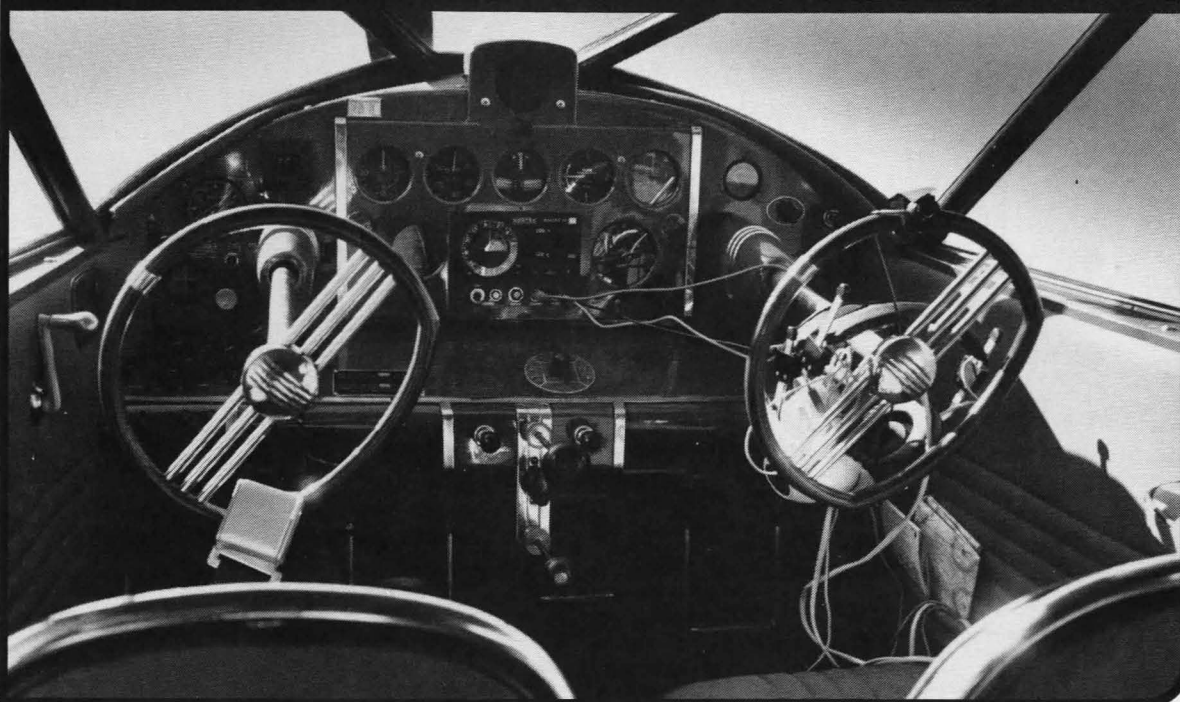
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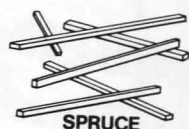
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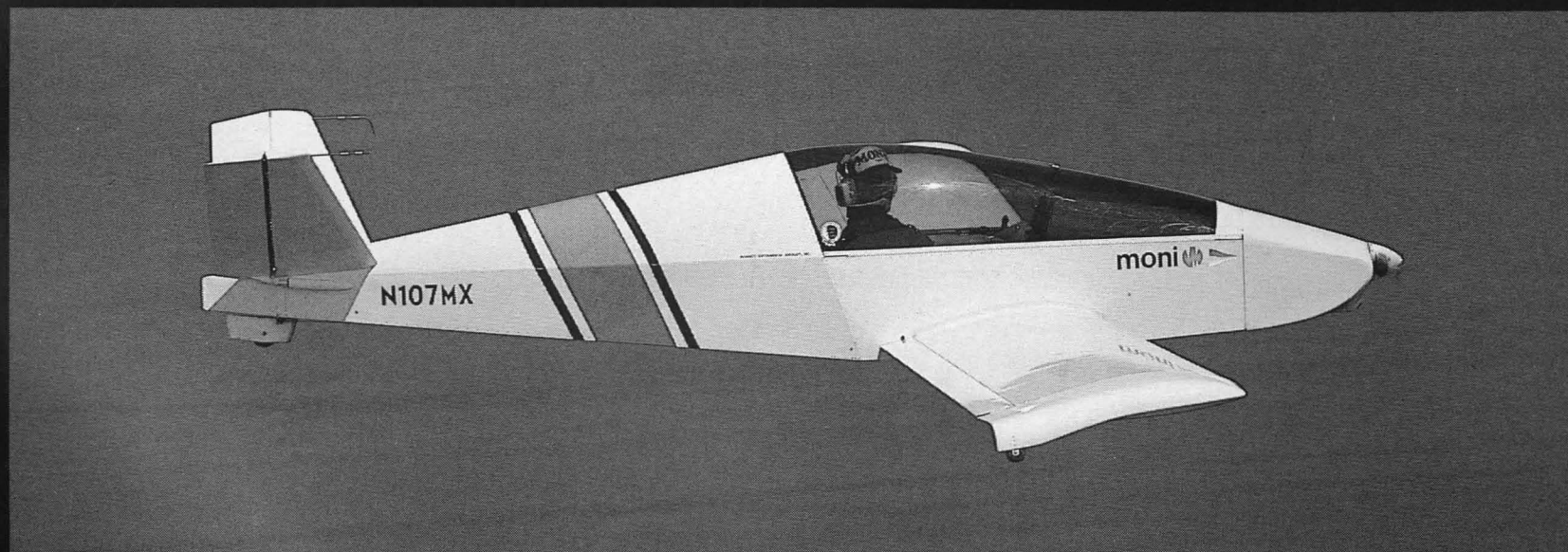
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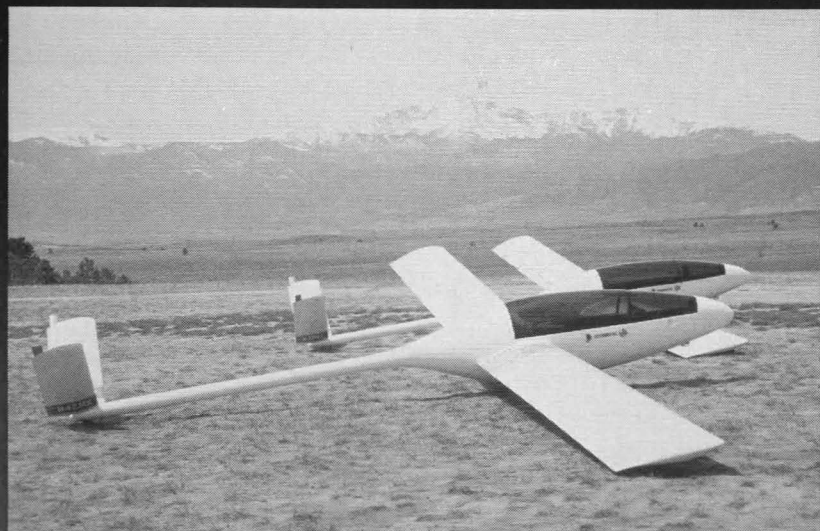
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